

AMERICAN *Cinematographer*

LEONARD CLAIRMONT

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★ THE MOTION PICTURE CAMERA MAGAZINE ★



In This Issue
ORTHICON PICKUP TUBE
FOR TELEVISION CAMERAS



JANUARY
1946



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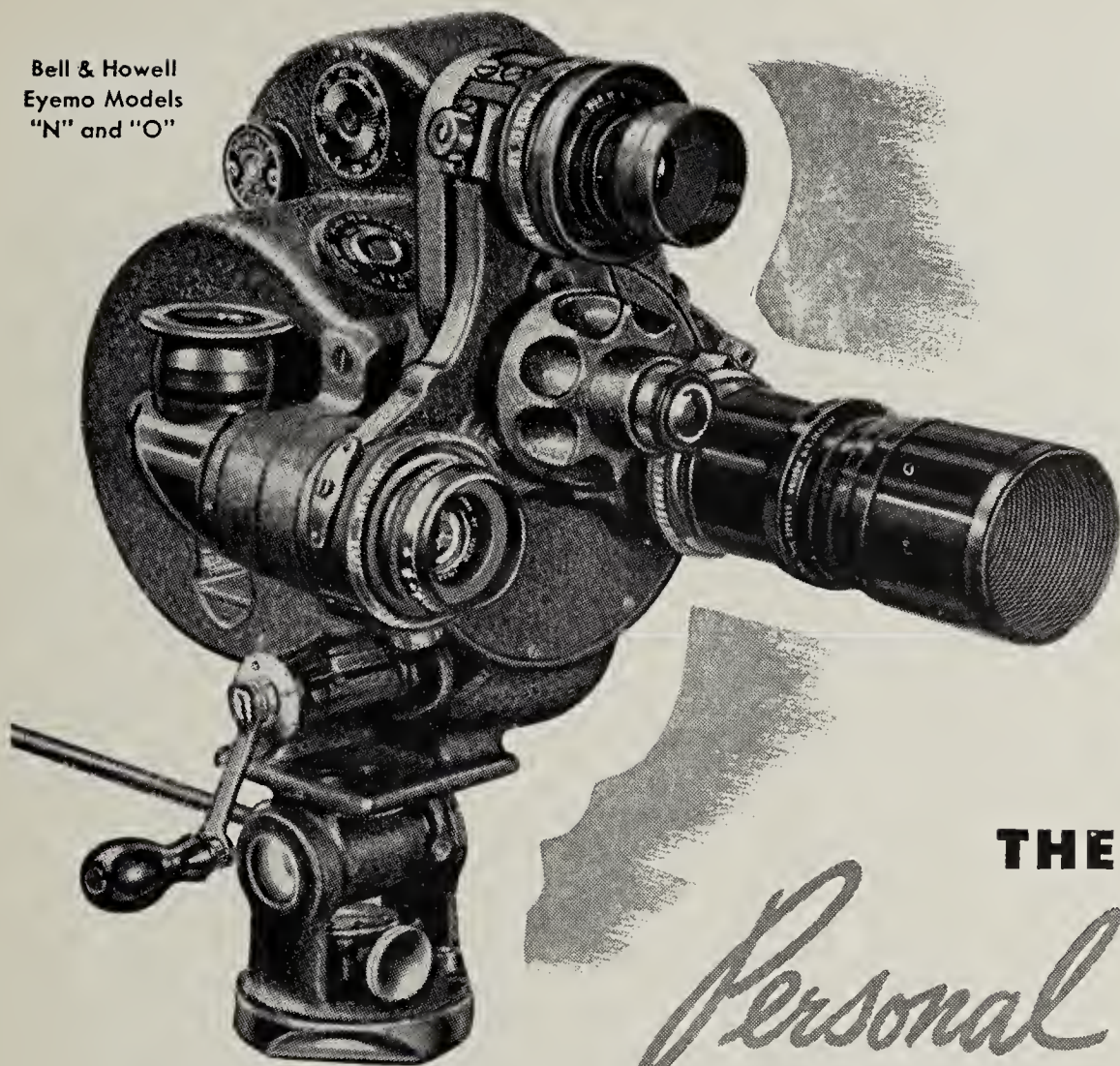
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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

JANUARY, 1946

NO. 1

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ON THE FRONT COVER is a photograph on the set of Monogram's production, "Suspense"; with Director Frank Tuttle and Director of Photography Karl Struss (in center) checking closeup of Belita and Barry Sullivan before the cameras roll. Photo by Clifton Kling.



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RCA Television camera equipped with new Image Orthicon pickup tube of extreme sensitivity. The Orthicon catches action under dim lighting conditions—in this case only a match—and accentuates signal's lighting qualities for transmission to any degree of increased brilliance.

Orthicon Pickup Tube for Television Cameras

A NEW television camera tube of revolutionary design and sensitivity emerged from wartime secrecy for exhibition by Radio Corporation of America in a series of studio and remote pickups in which it not only transmitted scenes illuminated by candle and match light but performed the amazing feat of picking up scenes with infra-red rays in a blacked-out room.

The new tube, known as the RCA Image Orthicon, was demonstrated recently in a studio of the National Broadcasting Company, Radio City, with the cooperation of NBC's engineering and production staff. In the exhibition, members of the audience saw themselves televised under lighting condition to

demonstrate the super sensitivity of the new electronic "eye" which can solve many of the major difficulties of illumination in television programming and makes possible 'round-the-clock television coverage of news and special events.

Further evidence of the tube's extreme sensitivity came in the transmission of scenes from a special rodeo show arranged at Madison Square Garden for the visiting United States Navy Fleet. Cowboy acts were picked up by the Image Orthicon and transmitter to the studio in a comparative demonstration displaying its advantage over conventional television pickup tubes in providing greater depth of perception and

clearer views under shifting light conditions.

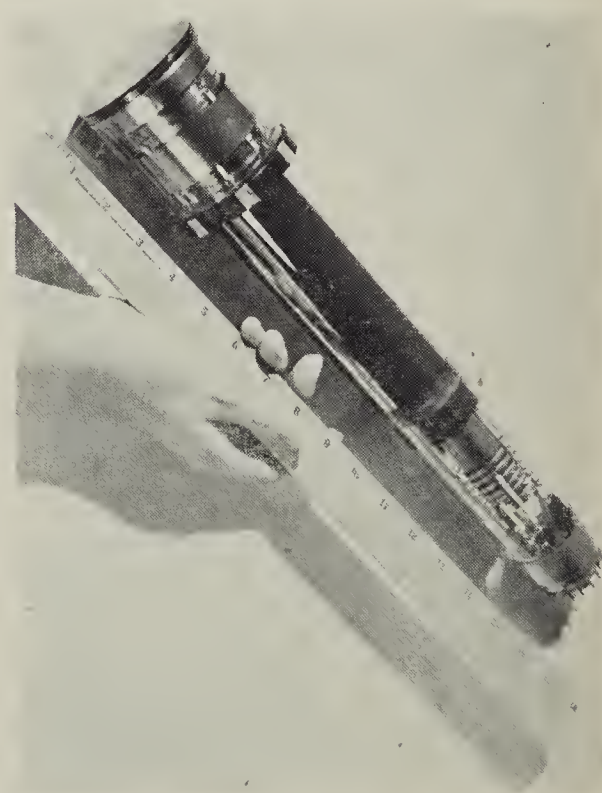
RCA-NBC engineers climaxed the demonstration by blacking out the studio where the writers were assembled, and providing the spectacle of picking up television scenes in apparent darkness. Unseen infra-red (black) lights were turned on, but it was so dark that a member of the audience could not see the person next to him. Then on the screens of television receivers in the studio appeared bright images of a dancer and other persons who were in the room. The Image Orthicon tube, it was explained, achieved the feat through its sensitivity to the infra-red rays.

Aladdin's Lamp of Television

"This is the Aladdin's Lamp of Television," declared John F. Royal, NBC Vice-President in charge of television. "It's revolutionary effect on lighting problems means that many of our major difficulties of illumination will be eliminated.

"This new instrument which is easily portable and suitable for use in every field of television opens new vistas that challenge the imagination. It assures television of 24 hour coverage, in daylight, twilight, or moonlight—in good weather and in bad.

Declaring the Image Orthicon to be 100 times more sensitive than conventional pick-up tubes, E. W. Engstrom, Research Director of RCA Laboratories, explained details of the development of the tube. He said that early models were built before the war in efforts of RCA television scientists and engineers to improve the quality of television transmission. When war came, the armed forces found urgent need for television applications, and throughout the



Compactness of the Orthicon tube is shown with length of 16 inches and diameter of two inches—not any larger than a tubular flashlight. Orthicon tube will allow for manufacture of a smaller, lightweight and more portable television camera.

conflict RCA research and development continued at an accelerated pace in response to military requirements. Many advances were made.

The Image Orthicon tube, for example, Mr. Engstrom said, emerged in its present form much sooner than would normally have been the case. A military secret until now, it can be revealed that it makes use of the most advanced results of more than twenty years of research not only in television pick-up tubes but in electron optics, photo-emission processes, electron multipliers, and special materials.

Announcing incorporation of the Image Orthicon in a new super-sensitive television camera to be manufactured by RCA Victor, Meade Brunet, General manager of the Company's Engineering Products Division, said that deliveries on the camera are expected to be made to television broadcasters in about six months.

"This equipment is especially well suited for televising events remote from the studio and those where brilliant lighting is either impracticable or undesirable," said Mr. Brunet. "The portable camera is lightweight, simple to operate, and can be quickly set up and placed in operation. It is particularly adaptable for use in televising out-of-door sports and news events and for remote indoor pick-ups such as in theaters, concert halls, schools, churches, courtrooms, and other public buildings."

Advantages in Performance

RCA engineers listed these specific advantages in performance of the Image Orthicon:

1. Ability to extend the range of operations to practically all scenes of visual interest, particularly those under low-lighting conditions.
2. Improved sensitivity, permitting greater depth of field and inclusion of background that might otherwise be blurred.
3. Improved stability which protects

(Continued on Page 27)

Pointers on Use New Ansco 16mm. Color Film

ANSCO's 16 mm. color film became available generally throughout the United States during the past few weeks, with company announcement disclosing that production of the film permits distribution on virtually unrestricted basis to dealers. Limited quantities of the new 16 mm. reversible color stock were distributed in eastern states last year, and the broadened availability results from lessened demands for the film by the armed forces.

For the time being, only 100 foot lengths of the daylight type film will be available, Ansco discloses, but within a few months other length rolls and the tungsten type film will be on the market. Processing charges are included in the purchase price of the 16 mm. color film, and exposed rolls have to be sent to Ansco main color laboratory in Binghamton, New York for such development, until processing labs are established at convenient points and it is expected that processing will be available on the Pacific Coast shortly after Feb. 1, 1946. Company also announces that duplicating service whereby extra prints can be struck off, will also be available.

Ansco's Information on Use

Despite that fact that 16 mm. Ansco color reversible film has a long scale of gradation and wide exposure latitude, it is important that correct exposure be given if best results are expected. Folder supplied with each roll of film will aid in determining correct exposure of the film, either by use of the exposure charts provided or when using a photo-cell type exposure meter. As a general rule, it is advisable to never use a smaller lens opening than f/11 when out-of-door exposures are made at 16 frames per second, regardless of how small a lens opening is indicated by the exposure meter; for experience has proven that even the lightest subjects under brightest sunlight conditions are underexposed

at lens openings smaller than f/11. Unless great care is used in interpreting the reading of even the finest photo-cell type exposure meters inaccuracies may, and often do, result. According to Ansco the printed chart in folder provides with each roll has been found to produce consistent results under the condition given.

This chart discloses that—at normal shutter speed of 16 frames per second with the Daylight type film—best results will be secured as follows:

	Front Lighted	Side Lighted
Bright Sunlight.....	f.8	f5.6
Hazy Sunlight.....	f5.6	—
Soft Shadows		
Sun Overcast.....	f.4	—
No Shadow		
Bright Day		
Sun Overcast.....	f2.8	—
Dull Day		

The above table is for use under average summer conditions in the temperate zones, from two hours after sunrise until two hours before sunset.

In winter, use next larger opening (one full stop) rather than that given in the table, provided there is no snow.

With exceptionally brilliant light, as in seascapes, snowscapes or at high altitudes, the indicated exposure may be halved.

The exposures in the table are for medium subjects. Dark subjects require one-half stop greater exposure, while light subjects should be given one-half stop less exposure.

For best results, Ansco recommends the exposure of the daylight type color film only in direct sunlight. Products is balanced for use without filters under the normal and recommended conditions.

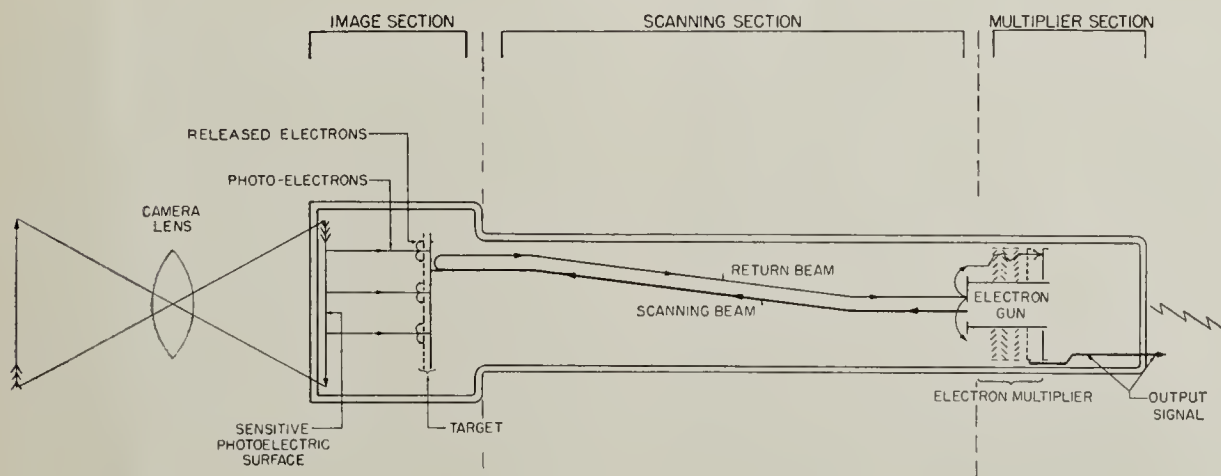
Hand Tests Possible

In a recent series of tests by Ansco technicians, it has been determined that short strips of 16 mm. Ansco color reversible film can be processed in a beaker or film tank to give an indication of correct exposure. It was observed that the density and color quality of the test strips processed by hand differed but slightly from that of film processed in the Ansco color laboratory. The practice of developing short strips of film to check exposure may prove advantageous at times if the individual realizes that similarly exposed film processed by Ansco may be slightly different in density and color quality from the home processed tests.

Procedure Where Duplicates Wanted

The 16 mm. Ansco color reversible film exposed with intention of having duplicates made on Ansco color film should be softly lighted so as to avoid extreme contrast because all duplicates exhibit somewhat higher contrast than the originals from which they are made. Films which have large, dark shadow areas and extremely light, or even clear highlights are seldom satisfactory when duplicated because these extreme conditions are even more pronounced and annoying in the duplicate film.

RCA IMAGE ORTHICON TUBE



HERE'S WHAT HAPPENS IN RCA'S NEW "IMAGE ORTHICON" PICK-UP TUBE

This simplified functional drawing of the new RCA Image Orthicon, an ultra-sensitive television camera pick-up tube, shows how the tube's response to the light of a single candle, or even a match, is built up to provide a signal which can reproduce images on home receiver screens. A light image from the subject (arrow at extreme left) is picked up by the camera lens and focused on the light-sensitive face of the tube, releasing electrons from each of thousands of tiny cells in proportion to the intensity of the light striking it. These electrons are directed on parallel courses from the back of the tube-face to the target, from which each striking electron liberates several more, leaving a pattern of proportionate positive charges on the front of the target. When the back of the target is scanned by the beam from the electron gun in the base of the tube, enough electrons are deposited at each point to neutralize the positive charges, the rest of the beam returning, as indicated, to a series of "electron multiplier" stages or dynodes surrounding the electron gun. After the returning "signal" beam has been multiplied many times, the signal is carried out of the tube to the television broadcast transmitter.

Automatic Follow-Focus Devices For Use In Cinematography

By JAMES T. STROHM and WILLIAM G. HECKLER

(Captains, Signal Corps, Camera Branch, Signal Corps Photographic Center, Long Island City, N. Y.)

IN THE course of producing training films at the Signal Corps Photographic Center, Long Island City, New York, it was soon realized by the cinematographers attached to the Camera Branch that, in many instances, the type of photography required for training films, orientation films, morale films, etc., was somewhat different than the photography required for the production of entertainment films as normally produced in the major Hollywood studios. At the outset the production cameramen and special effects cameramen soon found that a great percentage of the Signal Corps productions required numerous shots of maps, diagrams, mock-up models, inserts, miniatures, etc. In so many shots of this type it was necessary to open the scene with a full shot of a map, diagram, or model, and then move the camera in to a specific point in

order to call attention to it or emphasize it. The reverse of this procedure was also often the case, where it was necessary to open the shot at a specific point and then move the camera back in order to encompass the entire object.

Many difficulties were encountered in an effort to photograph such shots with the required degree of accuracy. First of all, the Camera Branch was hampered by having only a few highly trained and competent camera operators capable of operating the camera in these extremely difficult shots and also only a few assistant cameramen who had had enough experience in changing focus on lenses accurately. The procedure of accurately changing focus on a photographic lens while the camera is in motion is extremely difficult and requires a great deal of instruction and constant practice. It was found that inexpe-

rienced camera operators were never sure if the object being photographed was in sharp focus through the entire length of the scene, and it was always necessary to rephotograph the scene several times with the hope that one of the "takes" would be in sharp focus.

Difficulties were also experienced with camera dolly "weave" and vibrations, resulting from the human element introduced in starting and stopping the dolly and variations in the dolly tracks. For the same reason, acceleration surges were seldom absent. Also, accurate synchronization of in-and-out movements with up-and-down movements of the camera was seldom realized.

It soon became apparent that it would be advantageous to construct some sort of device which would eliminate the human element not only in moving the dolly but also automatically changing the focus of the photographing lens during the periods when the camera was in horizontal movement. Research work was begun to accomplish this end and resulted in the development of the present all-electric and fully automatic camera dolly which is used at the present time by the Camera Branch at the Signal Corps Photographic Center.

The fully automatic electric dolly is an adaptation of a standard Raby camera dolly. (See Fig. 1). The two standard rubber wheels are retained on the left side, while the standard rubber wheels on the right side have been replaced with two bronze wheels which have had a V-shape groove cut into their riding surfaces. Round $\frac{1}{2}$ in. tubings which are countersunk into a wooden base act as a straight-line guide for these wheels. Troublesome weave and vibrations are completely eliminated by this new combination of dolly guide wheels and track tubing. The track joints themselves are carefully butted together, eliminating the usual track irregularities.

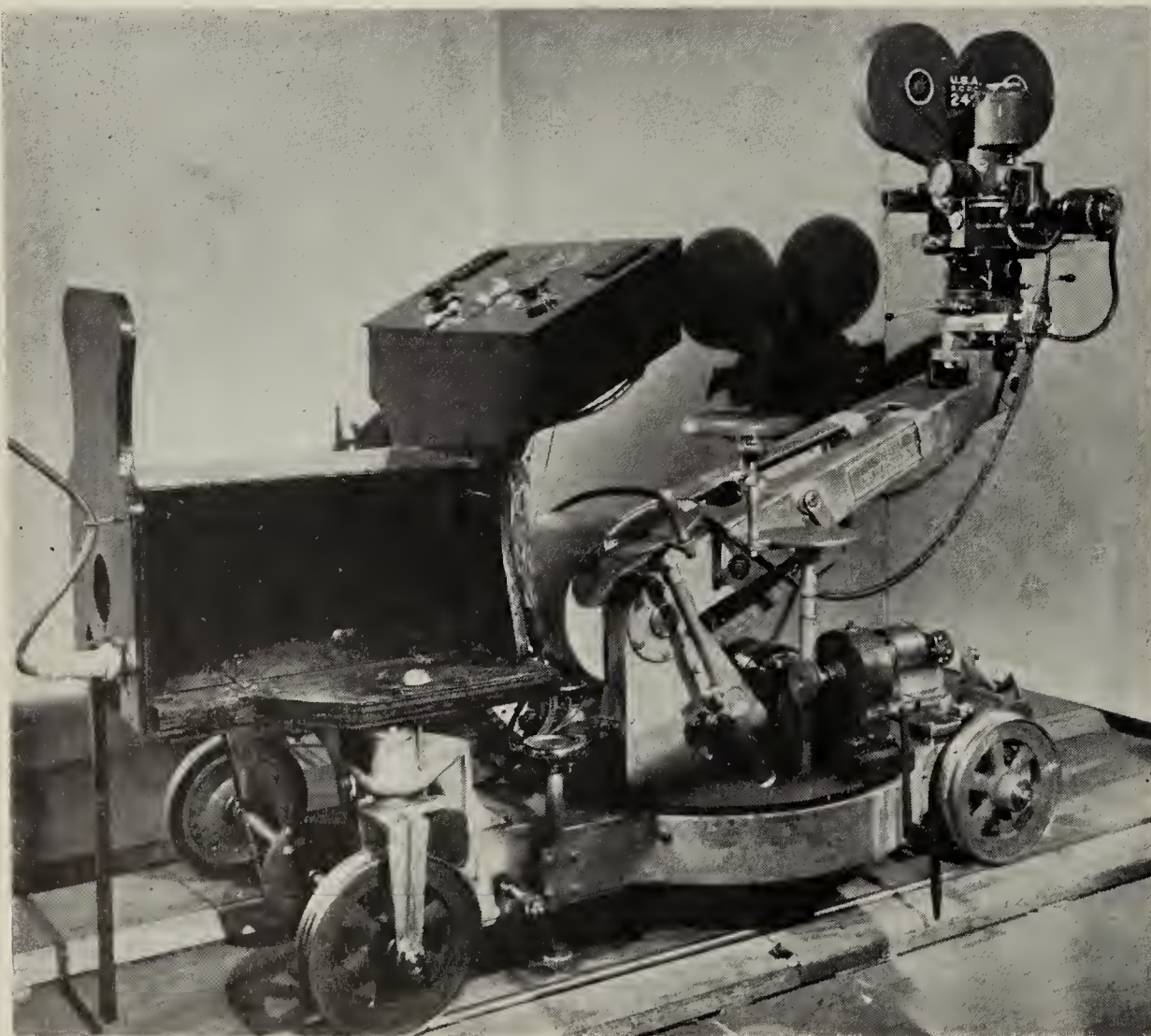


Fig. 1. Automatic dolly.

Presented at Spring, 1945, Technical Conference of Society of Motion Picture Engineers, and published in October, 1945, issue of SMPE Journal. Reprinted here with special permission of the SMPE.

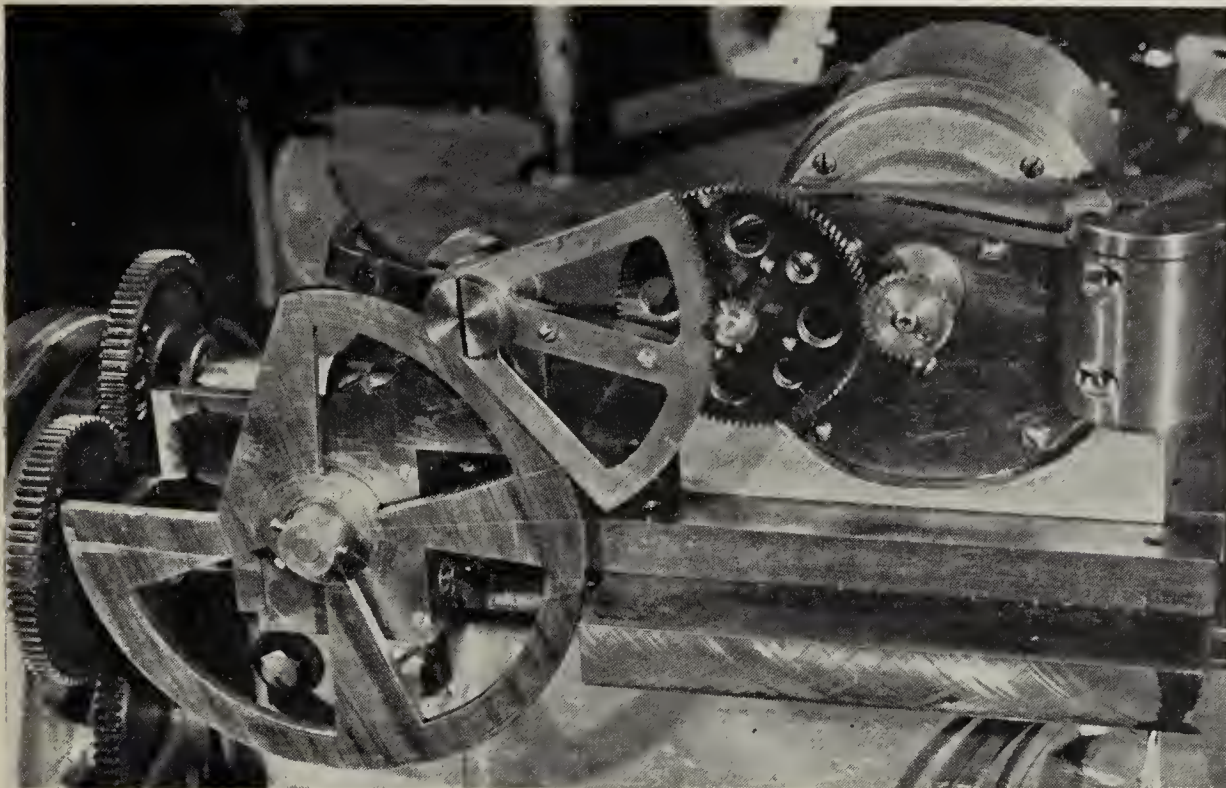


Fig. 2. Dolly cam and gear assembly.

The power unit which motivates the dolly consists of a $\frac{1}{4}$ h.p., 110 v d-c motor which has a top speed of 1725 rpm. The shaft of the motor is connected to the speed reducer box by means of a rubber coupling that takes up all motor vibrations as well as start and stop jars. The speed of the d-c motor is reduced 50 times by the reducer box, and a sprocket gear pulley from it engages the sprocket chain which in turn rotates the dolly axle and bronze power wheel. A rheostat governs the speed control, while standard reversing switches determine direction.

Essentially, the same type of power unit has also been installed on the dolly and is applied to the dolly tilt arm so that it may be raised or lowered with ease even when the dolly is in motion. To the rear of the unit a seat for the dolly operator is provided, together with a control panel which contains switches and controls that govern the speed and movement of both the dolly and the

tilt arm. The control panel also contains dials which show any given position of the dolly and the tilt arm. Once the dolly operator knows the conditions of the shot, he can duplicate these conditions any number of times without fear of error, for any error that he might make would be plainly indicated on the control panel after the shot was completed. Also, additional switches make it possible for the operator to control the entire series of movements by the throwing of a master switch.

The most important mechanism installed on the dolly, however, is the automatic follow-focus device. As stated above, this device was developed and installed because of the great need for accurate and positive focus, particularly on close follow shots where the narrow

depth of field characteristic of photographic lenses as they closely approach a given target demands extremely accurate focusing. This need was of particular importance in special effects work where follow shots are concerned mainly with extremely accurate framing and the extreme proximity of the lens to the object or target. Such examples can be cited as the need to move from a close-up of an individual to his mouth or eyes, or in some cases, to one eye. Another common case could be cited such as moving up to or away from small sections of maps or titles.

Although this device could be used in many instances in standard set procedure, no intent was made to displace current production methods and it was conceived only for those highly difficult follow shots which are almost impossible to accomplish when the cameraman must depend upon the judgment of the operator or assistant to focus the lens by hand. The automatic focusing of the photographing lens is accomplished in the following manner.

The focus unit receives its activation from the right front dolly wheel. (See Fig. 2). It transfers this energy to a cam, which has a contour pitch, complementary to the curvilinear action of a two inch lens or of the particular focal length lens desired. This action is applied to a small gear on the end of the shaft of a Selsyn generator motor. The rotation of this motor is transmitted to and received by a Selsyn receiving motor. A small gear, same size as on the generator, is mounted on the end of the receiving motor shaft. This activates a pinion gear, which turns the actual lens gear itself. (See Fig. 3).

There is a distinct advantage in using electrically connected Selsyn or inter-

(Continued on Page 22)

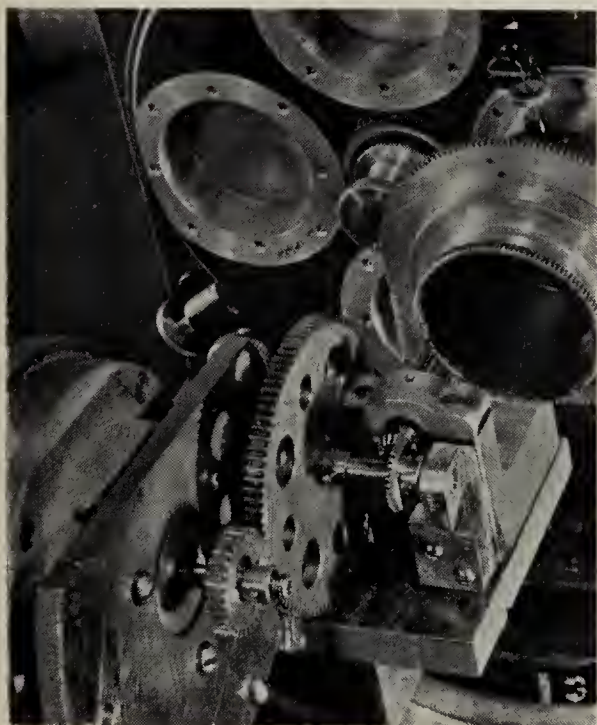


Fig. 3. Dolly lens gear assembly.



Fig. 4. Title and insert stand.



ACES of the CAMERA

PEVERELL MARLEY, A.S.C.

By HILDA BLACK

WHEN Pev Marley was graduated from high school he found himself face-to-face with a crisis in his life: should he enter Stanford as his parents had always planned, or should he get a job instead. It was no ordinary matter to decide, and wanting their son to enter Stanford was no idle whim on the part of his parents. Leland Stanford had been their friend, and from the day of Pev's birth, it was naturally taken for

granted that when the boy became of university age, he would enter Stanford. There had never been any question about it.

Which would have been fine, except that when young Marley reached that age, he couldn't make up his mind what he wanted to do about his future. Definitely, he didn't want to become a doctor or a lawyer, and the only reason he could find for going to college was to

have fun—football, track, fraternity activities—things like that. Such a program didn't seem to be sufficient excuse for putting in four years' time, figured the sensible lad. And so he decided to get some kind of a job during summer vacation and think the matter over.

By a lucky break, the job he landed was in the motion picture business as assistant to Al Wykoff, Cecil deMille's cameraman. All that summer Pev worked hard, as did all aspiring cameramen in those days. Today, for the same amount of work, four men—instead of one—would probably be hired. With practically no help. Pev's chores included: packing, unpacking and transporting 22 cases of camera equipment; setting up three cameras; loading the film in the morning and canning it at night; holding the slate; keeping a record of the footage. On location he had to take the cameras apart and put them together again; and always there was the little book in which he kept a de'tailed report of how far what actor was from what camera in a certain scene and what type of lens had been used. Those were questions that were sure to come up, and they had to be answered correctly. When a man worked for deMille, he had to be on his toes every minute. The director would not tolerate careless or disinterested employees.

In addition to everything else, Marley kept a little notebook of his own, and he still has it, to this day. It is his personal record of what he terms "deMille witicisms." He thought many of the director's remarks too good to be lost.

That summer's work convinced Pev Marley that he liked the motion picture business. And when schooltime rolled around again, he made his decision: instead of going to school and getting an academic education, he would get a practical one. And where, he asked himself, could he get a better understanding of the motion picture industry than with C. B. deMille, the king of them all. Pev says now that he has never regretted his choice, even though, at the time, it did cause near-havoc in his family.

Everybody worked hard in the picture business in those days, and many of the men who are now tops in the profession, started just as Pev did—carrying equipment, taking cameras apart, and putting them together again—and the dozen and one other odd jobs they are called upon to do. It was tough, but it was one certain way to the top. You learned the hard way.

Pev got the benefit of the finest training in the business, for the deMille epics were all made on the grand scale. Marley worked on such gigantic productions as "The King of Kings," (which later opened Grauman's Chinese Theater), "The Ten Commandments," "The Volga Boatman" (it opened the Carthay Circle), "Feet of Clay," and "Dynamite" among others.

Perhaps it was his youth, eagerness, ambition and his great respect for the

(Continued on Page 31)

1946

and always — — —

EXPECT CONTINUANCE

OF

THE BEST

in all

EASTMAN FILMS

and ditto in

BRULATOUR SERVICE

J. E. BRULATOUR, Inc.

SIXTEEN GOES HOLLYWOOD

By RAY FERNSTROM, A. S. C.

BEFORE the war, both Technicolor and Cinecolor were blowing up sixteen to thirty-five with results that reached general theatrical distribution. None were features until Army, Navy and Marine Corps films arrived. Then sixteen grew up. Now it is quite possible that the future will see entire features shot in sixteen for blowup. Several professional cameras are nearly ready for such productions. Due to the enlargement factor necessary, many new features will be added or included in these machines. Amateur color can be enlarged but this is only another example of where only the professional cinematographer and the tools of his art can deliver the quality results demanded by major producers.

Just the other day I viewed the Mitchell Sixteen, a professional's camera which is a midget Mitchell NC. All the detail of the bigger model is incorporated in this lighter sixteen. A new tripod, equally as rigid as its older brother looks and acts professional. For the last ten years I've used every conceivable model sixteen camera, both in and out of the Army; those made here and abroad. Now at long last we are beginning to get the type of equipment we, the professionals, need before we can consistently deliver

the same color quality photography we are able to do in thirty-five.

Both the Mitchell Sixteen and the new Maurer, (which I haven't seen) promise the necessary accessories we require. I for one, need a matte box and sunshade with several filter and pola screen holders. Otherwise it is impossible to control overall exposure on a monopack type film. I use graduated neutral density filters to hold back hot skies. Often a pola screen at the same time to darken the sky and accentuate cloud effects. At the same time Harrison color correcting filters need a holder. The place to correct for color of light is in the camera at time of shooting. This is simplified with the Harrison Color and Kelvin Meter in addition to a good exposure meter. I use a GE because I can read through graduates and pola screens ("2") and thus balance exposures overall for the scene.

Furthermore, I like a glass (coated preferably) out in front on which I can dab transparent color to heighten effects where there is no actual color in the scheme. To use so many pieces of optical glass before a lens I have all lens and filter elements coated here in Hollywood by ACCRA Instruments. They do a good job of balancing their coating for color,

using a brown tone on one side which is neutralized by blue on the other. After coating surfaces of lenses and filters I suggest that tests be made to compensate your meter to the new speed of your lenses and filter transmission.

The Mitchell Sixteen will have a professional matte box with standard thirty-five lenses and mounts. Follow focus and blimping will be the same simple routine as with thirty-five Mitchells, except for the adaptors.

With improved equipment, film, and processes, sixteen will take over a great deal of thirty-five's heavy load of color production both in sixteen distribution and in thirty-five blowups, especially on foreign and domestic type pictures that will carry crews and equipment to the far corners of the globe.

Quite a number of sixteen film features have been made and released through sixteen distributing channels and many more are on the way. Several were shot by A.S.C. members which more than anything else proves that sixteen is really "going Hollywood." As more and more A.S.C. men add their professional touches to sixteen the results will dignify the sixteen productions now planned. After all, what difference does the size of film make to a professional photographer of either stills or motion pictures? Sixteen needs A.S.C. men more than workers in any other category.

This is even more apparent when such originals are used in enlargement to thirty-five Technicolor or other processes. The original must be considered as our negative and never viewed as a print. A good original never should look good if screened. Only the dupes or blowup negatives or copies should have the "look" of original Kodachrome or Ansco. To get the necessary result is a matter of tests and more tests, carrying the job through to the print and then screening that. On a recent feature at Monogram, a 5-reel fashion film, I shot all scenes with three different exposures. One for color cutting, one for sixteen dupes and one for Technicolor enlargement to negatives and prints by IB. From this experience I used the resultant blowup technique in shooting Howard Hill shorts at Warners for Technicolor prints in thirty-five.

On these shorts I use the Professional 0.1 Camera that was built by Bell & Howell before the war. It is a professional instrument in all details, but they only built this one camera. It is owned and was developed to its present stage by Harry McMahan of United States Motion Pictures. He and I shoot "Hollywood Mini-Tours" for blowup to Cinecolor with it. These films are released nationally.

Last week I finished three feature-length sixteen pictures in Kodachrome

(Continued on Page 26)



Ray Fernstrom, A.S.C. with the new "Mitchell 16" camera.

Controlled Light for BLACK and WHITE and Color Photography

COLOR photography is the thing, but if it's to be color you must be able to control your light, and you will need Bardwell & McAlister Lighting Equipment for good work.

Bardwell & McAlister Lighting Equipment was originally designed for color as well as black and white. For over fifteen years, our engineers in consultation with the ace cameramen of Hollywood, have developed a complete line of spots and accessories which meet every requirement

of the motion picture industry. It is characteristic of all Bardwell & McAlister lights that they are cool, noiseless and optically correct.

Fresnel type lenses on all Bardwell & McAlister spots permit full illumination with a smooth field which can be controlled for all requirements. Bardwell & McAlister lights are the accepted standard for excellence throughout the motion picture industry. Place your orders now for early delivery. No priorities required.

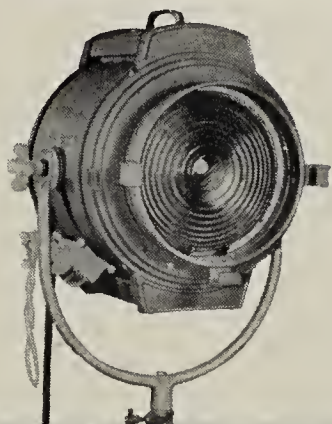


The Baby Keg-Lite
500 or 750 Watt Spot

THE BABY KEG-LITE (shown above) is a lightweight 500 or 750 Watt spot for use as a key light, and for special lighting jobs. Sturdily built, the design assures low temperatures, uniform heat expansion and elimination of heat noises. All light ranges between a 4 degree spot and 44 degree flood, controlled by a small lever from front or back. Fresnel type lens gives maximum light pick-up. Stand extends from 4'2" to 8'6". Total weight 25 pounds.



THE FOCO SPOT is for use with the Baby Keg-Lite and gives a concentrated spot of light with sharp edges in either round or rectangular forms. Revolving disc projects circles ranging from 3 3/4" to 8 1/4" in diameter. Novel background effects may be obtained with painted slides.



The Junior Spot
1000-2000 Watts

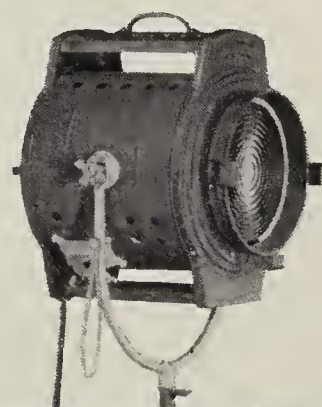


Single Broad
500 to 750 Watts

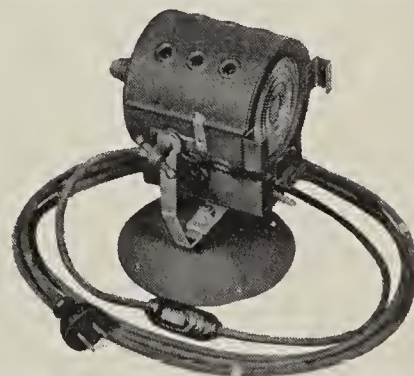
• *Write* for literature describing the Baby Keg-Lite, The Dinky-Inkie, The Junior Spot (1000-2000 Watts), the Senior Spot (5000 Watts), the Single and Double Broads, and their accessories as shown in the accompanying illustrations. Bardwell & McAlister lighting equipment has a complete line of Snoots, Diffusers, Barn Doors and other accessories for controlling light at all angles and under all conditions. Address Dept. 24 - 16.



The Double Broad
2000 Watts



The Senior Spot
5000 Watts



The Dinky-Inkie
100 to 150 Watt Spot

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REVIEW OF THE FILM NEWS

MOST important news of the past month was the formation of United World Pictures by International (Leo Spitz and William Goetz), Universal, and British film tycoon J. Arthur Rank. Deal has potentialities of lifting Universal to position among the top major companies of the business; and—at this point—looks like a long-range association of the three participants for very interesting future expansion and progress.

Stripping the formal announcement of the formation to essential facts: United World Pictures will tie in closely with Rank's present and future theatre interests in Great Britain, Canada, Australia, France, India, and other countries to give substantial bookings of company releases on a world-wide scale. If eventually necessary to insure playdates and proper showcasing of product in the United States, theatres in key cities may likely be either acquired or constructed. But, from Universal's record of the past five years, and International's healthy key runs generally since its formation two years ago, there seems little need of American theatre tieups to insure outlet of future productions.

Spitz-Goetz' International Pictures, Inc., which has been producing four top features annually for RKO release, becomes inactive; and new International Pictures Corp. is being formed to carry on, with joint ownership of Spitz-Goetz and Universal. New International will produce minimum of eight productions annually; while Rank's British producing units will also contribute the same number of pictures for world release. Added product goes through Universal exchanges in the United States and most of the foreign countries.

Eventual Universal Control?

Although it was definitely stated that at this time there would be no sale of any stock interest in Universal to either Rank or Spitz-Goetz, some trade observers figure that such a move might eventuate in the near or distant future. Rank already holds a 25% interest in Universal through acquisition of General Film Distributors of England. Latter originally participated in the original financing setup which bought Universal from the late Carl Laemmle, sr., for around \$8,000,000 in 1936. If, as might be possible, other financial interests holding large blocks of Universal stock might sell in the next year or so, there is no question but what Spitz-Goetz would pick up such offerings to combine with Rank for operating control of the company.

Universal's First Combo

It is interesting to note that this is the first time that Universal has par-

ticipated in an amalgamation of any sort in its long and colorful career. Originally launched by Laemmle around 1910, it kept independent through a 35 year career for two records—(1) the oldest continuing company, and (2) never an amalgamation despite the tough going at many points. But the present association with Goetz-Spitz and Rank has many advantages for old U; bringing in plenty of executive and production manpower, talent, strong theatre affiliations world-wide, and top box office talent in the star, director, producer and writer fields. That's why these acquisitions carry potentialities of lifting the Universal structure up among Metro-Goldwyn-Mayer, Paramount, Warners and 20th Century-Fox, within a reasonable time.

Watch Goetz

Although, on the surface, it would appear that Rank, with his global theatre holdings and financial control of British film producing units, would be the major factor in the United World setup, the key executive appears to be Goetz. The latter has made solid progress in the past 12 years; generating loyalty and enthusiasm of talent and production personnel so necessary for the successful production of motion pictures. Besides his personal abilities, Goetz has the sage advice and counsel of Louis B. Mayer, which cannot be discounted. When it is recalled that Mayer took two unprofitable studios—Metro and Goldwyn—and quickly welded together the greatest producing organization of the industry; his guidance of Goetz' activities is invaluable in numerous ways.

Television Progress

The more plans for general television broadcasts develop, the closer the new medium veers away from the radio industry into closest contact with motion pictures. Utilization of motion pictures for general television broadcasts rather than live action, seems to be growing in general acceptance within the inner councils of television. During the past few weeks, both Paramount and Disney on the Pacific Coast have applied for television transmitter permits.

Paramount, with a large interest in DuMont, is probing a new angle on theatre broadcasts of current events of national interest. Paul Raiburn, an executive assistant to Paramount president Barney Balaban, has been exploring the possibilities of televising a national event into the large theatres of the company's circuit; with the receiving houses having camera setup whereby film could be made of the television

broadcast and the exposed film quickly developed in a compact tank for projection on the theatre screen as soon as the main feature or other attraction is completed. The idea has possibilities, as it would overcome the difficulty of a theatre requiring to stop a feature in the middle in order to directly televise an important happening directly onto the screen. According to information at hand, Paramount's television channel would broadcast the picture via a negative image, so that take-off film in the theatre would be a positive and not require additional step of printing.

Disney, in applying for television stations in Los Angeles, San Francisco and San Diego, figures on a long-range proposition which would eventually hook the trio together via coaxial cable or some other means. The cartoon producer is figuring on production of films for television broadcasts—with both cartoons and live action—and apparently expects the three coast tele stations to become showcases for his product made for television advertisers.

20mm. for Theatres

For many years, the large producer-distributor companies have ignored the use of 16 mm. release prints for theatrical showings in both this country and abroad. However, the successful Army and Navy circuits entertaining personnel at and behind the far-flung battlefronts, proved to the film officials that the miniature films held great potentialities for theatrical use, especially to expand distribution in the foreign markets where heretofore many smaller communities did not have the power facilities, or could not support, the regulation 35 mm. size.

Major companies, with Loew's International (Metro-Goldwyn-Mayer) in the lead, are planning immediate availability of 16 mm. prints of entertainment features for widespread expansion of showing abroad—Central and South America, Africa, the Near East, and Asia.

In the United States, the distributors have shied away from making the 16 mm. prints available for release. Basic reason for this attitude is fear that such prints would have to be booked to non-theatrical accounts, with resultant vigorous complaints from the regular exhibitors that competition from the schools, churches, and other locations not classed as theatres, would be detrimental to the regularly-operated show-houses.

But the film companies, recognizing the potentialities of expanding distribu-

(Continued on Page 34)

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35MM SOUND CAMERAS

**COMPLETE WITH AMPLIFIERS AND POWER SUPPLIES —
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**OUTFIT FOR THE
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Here's the COMPLETE outfit you've been looking for—waiting for—wishing for! Here's EVERYTHING you need to put you in business for yourself the day you receive it. Everything brand new, ready to go to work for YOU. No essential item is missing from this ALL-IN-ONE outfit, which includes:

ONE BERNDT-MAURER 16MM CAMERA

Complete with 3 Lenses (2 Biatars and 1 Sannar), Mott Box, View Finder, one Synchronaus Motor 110-Volt and one 12-Volt Motor, Free-head Mitchell Tripod and additional accessories.

ONE BERNDT-MAURER MODEL D RECORDER

Complete with B-M two channel Amplifier, Power Supply (AC), Noise Reduction with AC Built-In Power Supply, 4-Position Mixer, Western Electric Microphone, Boom, 32-Volt Generator, 200-Watt in Case DC-110AC and additional accessories.

ONE 16MM SOUND MOVIOLA

Double and Single, complete with Amplifier and Speaker, Film Measuring Guide, 2 Editing Cons, 2 Berndt-Mourer Rewinders.

LIGHTS

Four Bordwell-McAllister 2KW Solar Spots complete with Double Extension Stands and Diffusers, 5 Capitol 2KW Solar Spots.

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NO CHERRY BLOSSOMS IN A FACTORY

A Discussion on Photographing
Educational Motion Pictures

By WALTER WISE

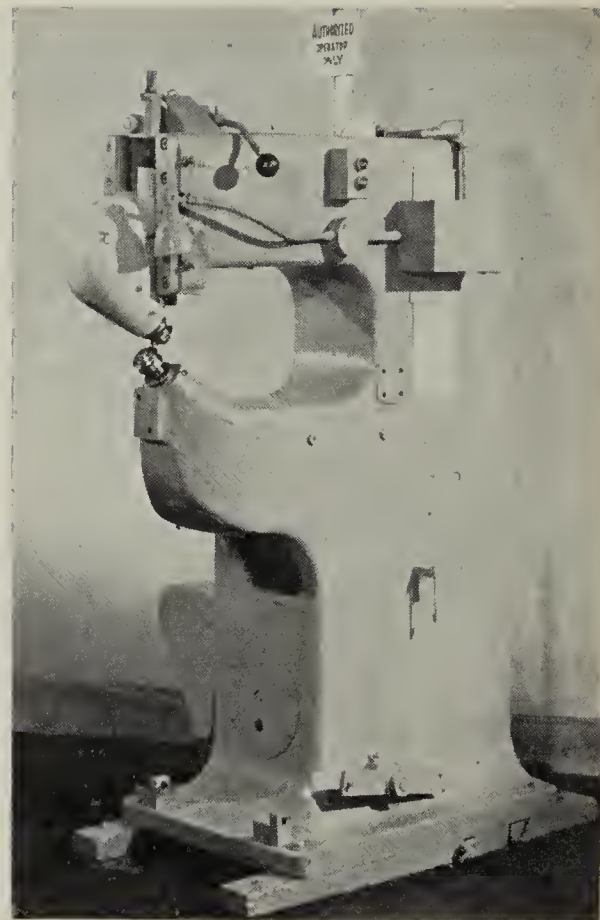
(Editor's Note: Mr. Wise is head of Tradefilms, which has been producing both commercial pictures and training films for the armed services during the past six years. The author was previously with major studios as a writer for eight years; and his experience in the two fields of film production qualifies him to compare the mediums.)

THERE is absolutely no doubt about it. In the next few years educational motion pictures are going to provide an increasing source of income to cameramen. There is also no doubt about another point. They are going to earn every dollar they make.

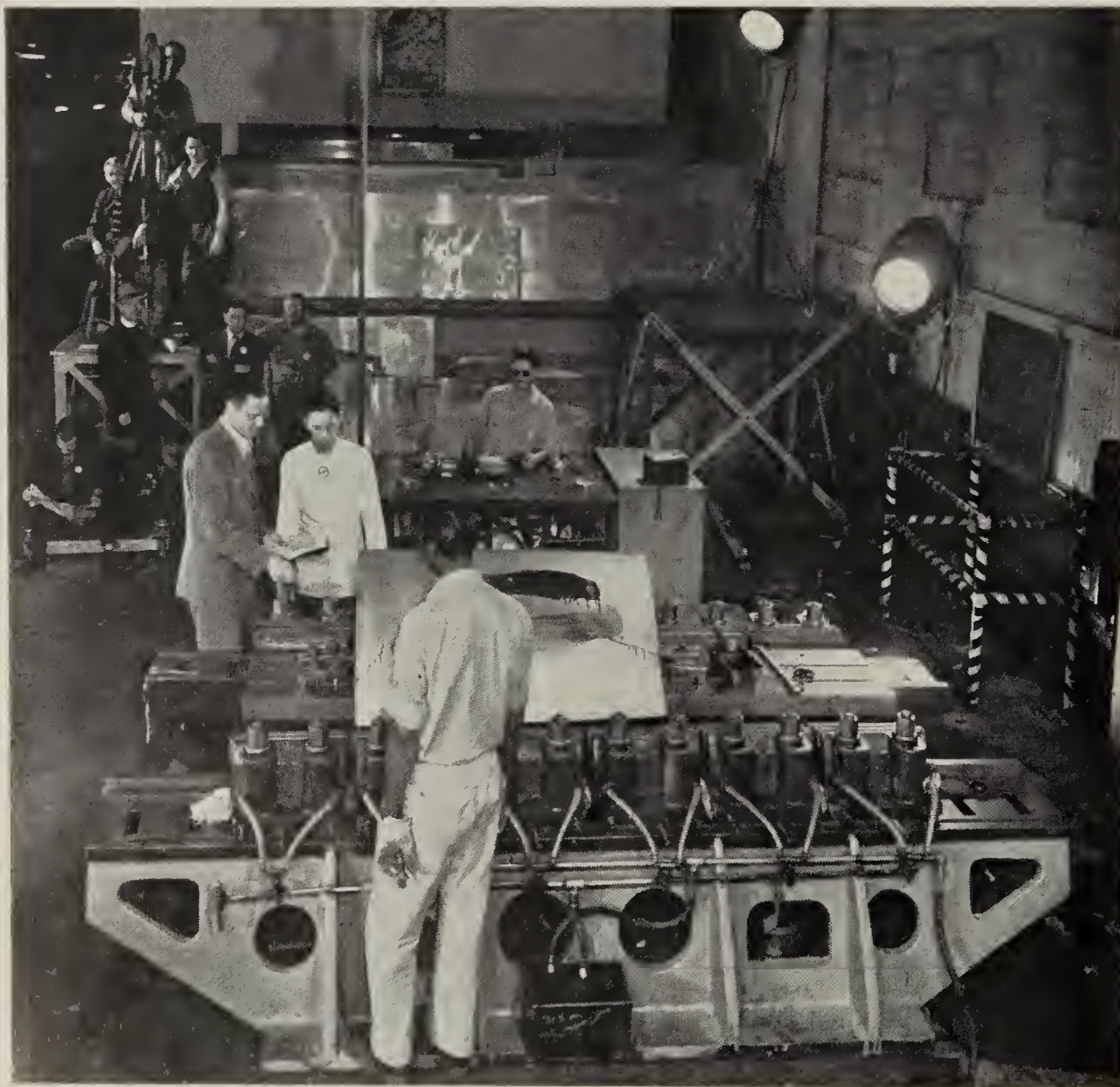
We all know that even in the theatrical field creative camera work does not always receive the recognition or appreciation which it merits. If a cameraman hears some one gush that "Ermatrude

Schlagenhopper looked positively ravishing," he can interpret that as the ultimate compliment. Because, despite a slight tendency to nymphomania on Ermatrude's part, very few people, considering the world's total population, have had a good look at her before Wheaties time.

On the credit side of the cameraman's ledger as long as he stays inside the studio he has the art department, make-up men, set dressers and all the related



Factory machinery to be used for photographing vocational training films should be either painted or sprayed with gun-metal paint for best results.



Cameras and lights must be adapted within space limitations when shooting factory training films. This illustration, in which the author is rehearsing a machine operator, gives far more latitude for setup than is generally the case.

crafts to help him. He even has the sweater manufacturers on his side for the benefit of audiences who can count up to two. In a pinch he can even call for a potted palm or a branch of cherry blossoms. But there are no cherry blossoms in a factory and sex appeal is not standard equipment on turret lathes or punch presses. Here the cameraman is on his own, without studio resources, often without adequate lighting facilities. All that he can rely on is his experience and his ability.

At first thought this might seem a harsh analysis or a result caused by conditions which need not exist. But before you reach a final conclusion, consider the conditions for yourself.

1. Training films should be photographed at the actual scene of action, even in cases where the equipment to be used is small enough to be set up in a studio. The background, the "feel of the shop," is of major importance in training for any skill.

2. In a factory you will seldom find sufficient clearance around your subject to place the number of lights you would like to use.

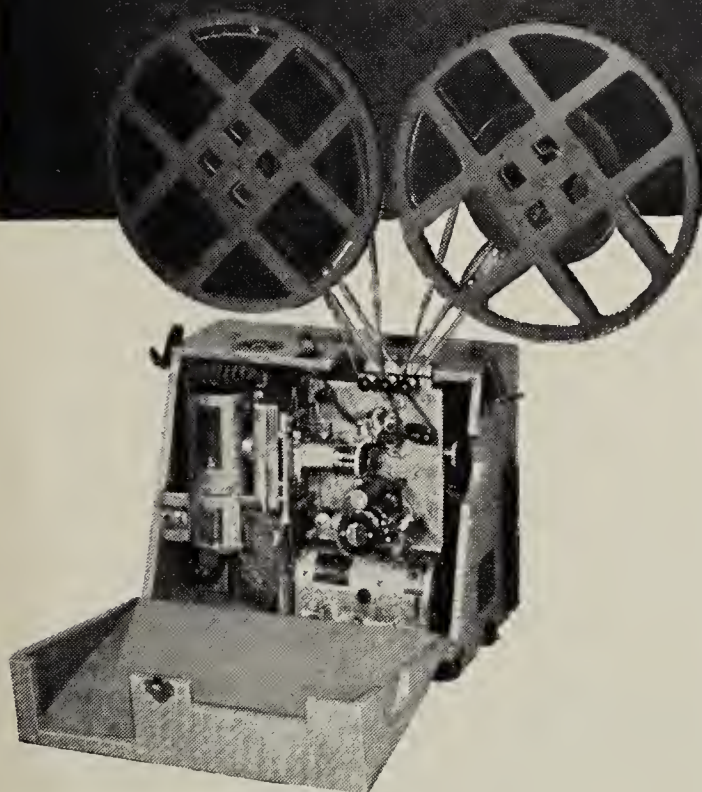
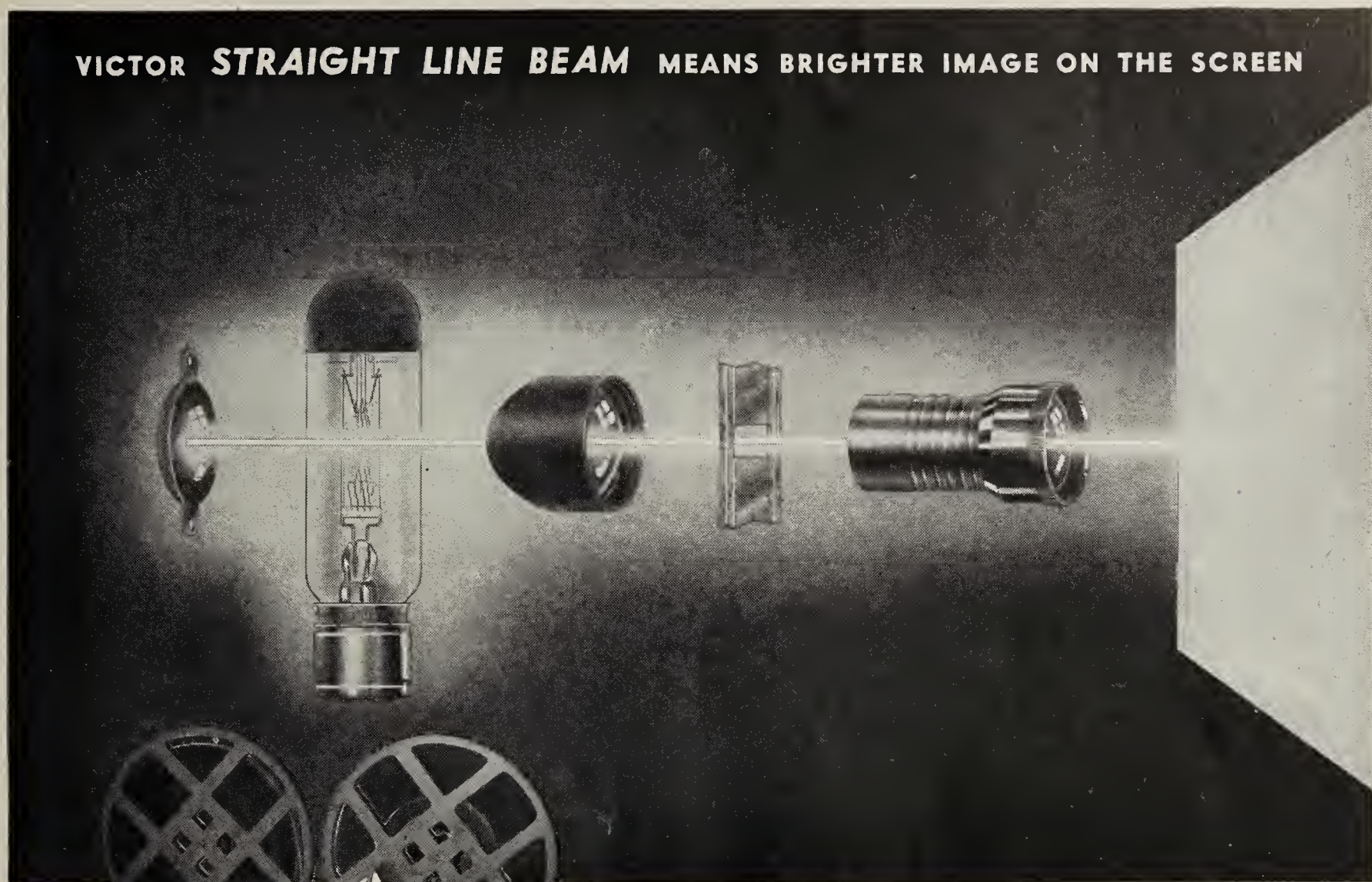
3. Low budgets are a constant bugaboo. This is not due to penny pinching on *anybody's* part. The revenue from training films simply does not permit large production costs.

4. And don't let's forget the little things such as camera-shy workers on the demonstration machine, uneven floors, low ceilings, cramped quarters and trying to make yourself heard above the gentle chorus of a battery of drop hammers.

These are general conditions which apply to training films as a whole. But each new educational picture has its own problems. Speaking now solely from

(Continued on Page 32)

VICTOR STRAIGHT LINE BEAM MEANS BRIGHTER IMAGE ON THE SCREEN



**THE ANIMATOPHONE
MASTERPIECE OF 16MM CRAFTSMANSHIP!**

Perfect 16mm Sound Pictures

FROM PERFECT PROJECTION

Brighter projection is achieved on the Animatophone by Victor's direct optical system. All elements permanently aligned at the factory . . . nothing to get out of order.

Spira-draft Lamp House means longer lamp life . . . means brighter image for a longer time . . . means fewer lamp replacements. Standard, pre-focused lamps obtainable anywhere, at no extra cost.



Other exclusive features — for brighter illumination — are: Coated Projection Lens, Conza Condenser Lens, Special Shutter Design and Instant Accessibility to entire optical system for cleaning.



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M A K E R S O F 1 6 M M E Q U I P M E N T S I N C E 1 9 2 3

New Lens For B & H Companion 8 Camera

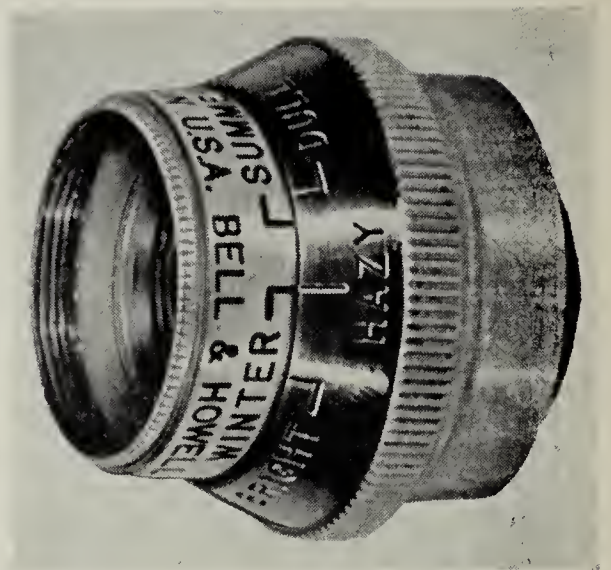
A new 0.5 inch F2.8 lens for the B&H 8 mm. Companion Camera has been designed for the amateur cine-photographer who doesn't care to be bothered with a light meter and F stops.

In addition to the standard F stops another scale has been added. The stationary ring is calibrated into two divisions, "Winter" and "Summer." The movable ring is divided by three lines marked, "Bright," "Hazy," "Dull." An example of its operation is as follows: If the line marked "Dull" is placed opposite line marked "Winter," the lens diaphragm will be wide open at F2.8. Conversely, if the line marked "Bright" is placed opposite the indentation for

"Summer" the lens diaphragm will be at its smallest opening.

This new lens has been developed to dispel the mystery surrounding F stops that exists in numerous amateur minds. Many people who formerly considered home movie-making an intricate art will be impressed with the simple manner of determining correct diaphragm openings. A glance at the sky, a twist of the wrist, the diaphragm is accurately adjusted!

Another innovation is the faster speed of the new lens. Prior to the war, an F3.5 lens was standard equipment on the Filmo Companion Camera. The new speed, F2.8, represents a great improvement.



Bell & Howell Companion 8 with its calibrations which provide error-proof focusing—even for beginners. F-stop markings are also given for those who prefer the latter.

National Carbon Establishes Technical Specialist Group

Expansion of the technical service facilities of National Carbon Co. is effected by establishment of a Technical Specialists group for consultation on more effective and efficient use of lighting carbons for studio arcs and theatre projectors.

E. R. Geib will direct overall activities from the company's Cleveland office; with Charles W. Handley concentrating solely on west coast studio lighting problems and practices. His previous other duties for the company have been delegated elsewhere to allow full time and effort in the studio field. P. D. Ries will headquarter in the east to handle both

studio and theatre lighting contacts, while William C. Kunzman continues as general representative in the national field.

Moviola Expansion Plans

Mark Serrurier, after a number of years on the staff of California Institute of Technology during which time he was in charge of structural design for the 200-inch telescope to be installed at Mount Palomar and for the cooperative wind tunnel, has formed Moviola Manufacturing Co. Latter firm will be closely associated with the Moviola Company which is headed by his father, Iwan Serrurier.

Trego Starts Sports Series in 16 mm.

Charles Trego is producing "Surf Board Rhythm," first of series of sports shorts in 16 mm. at Telefilm Studios. Reel depicts intricacies of surf board riding as demonstrated by experts.

Olesen Co. Handles Commercial Sales on RCA 16 mm. Sound Projectors

Otto K. Olesen Co. of Hollywood has been appointed dealer for commercial sales of RCA's lines of 16 mm. sound projectors. Sales and service departments are being organized by Olesen Co. for the RCA equipment.



National Carbon Company's Technical Specialists



E. R. GEIB
Cleveland



C. W. HANDLEY
Hollywood



P. D. RIES
East



W. C. KUNZMANN
National



Houston FILM PROCESSING EQUIPMENT IS THE ANSWER

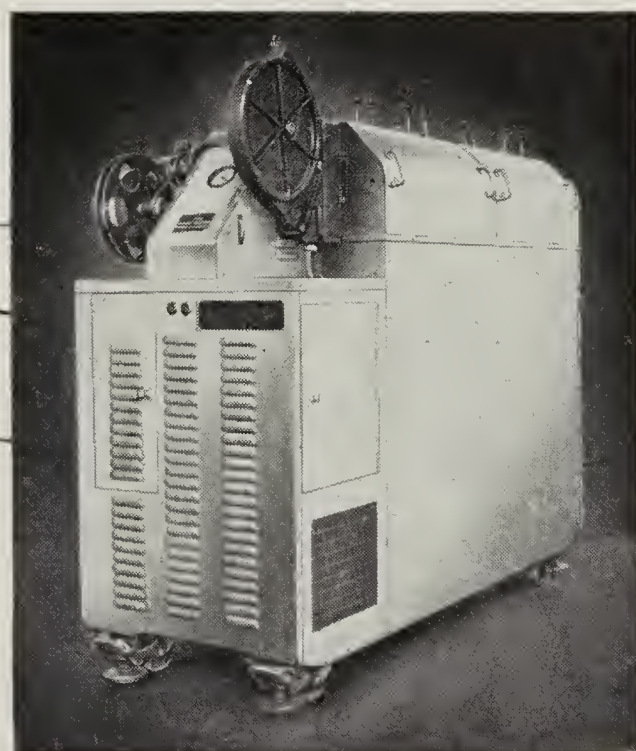
TODAY'S business operations are being speeded and simplified by the use of microfilm and motion pictures. By offering facilities for fast, local processing of such film, the owner of Houston Film Processing Equipment can build a profitable, permanent business.

Users of film are everywhere. Mercantile establishments, financial institutions, government agencies and others use microfilm for copying and recording. Manufacturers and sales organizations use both 16 mm. and 35 mm. motion pictures for training and sales. Studios and photographic supply stores constantly need film processing.

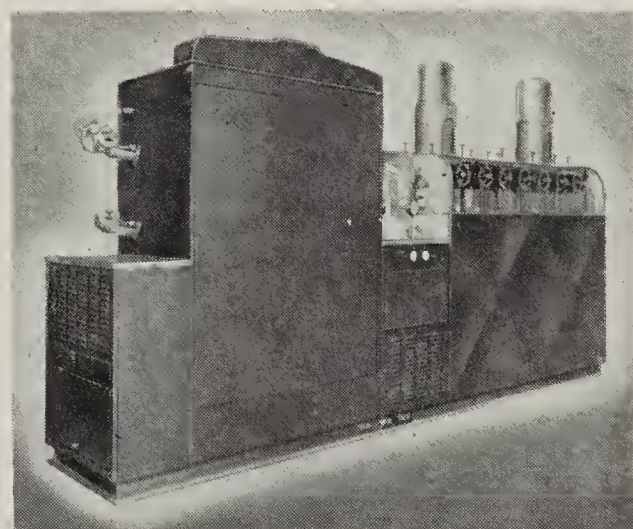
To these and scores of other users of film the Houston owner offers a *needed* service—a service becoming increasingly necessary to every community. Houston equipment is the *proven* answer.

★ ★ ★

Houston Film Processing Equipment is designed and built by men who know the needs of this industry. Fully automatic, compact and completely self-contained, these machines require no extra equipment. Write for illustrated folder and prices.



Houston Model 11 — Processes 16 mm. negative, positive and reversal film. Processing speeds up to 20 feet per min.



Houston Model 10 — Processes 35 mm. negative and positive film. Processing speeds up to 2400 feet per hour.

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AMONG THE MOVIE CLUBS

Brooklyn Amateur Cine Club

Charles Ross, president of Brooklyn Amateur Cine Club, is taking up permanent residence in California, resulting in Francis Sinclair taking over leadership of the organization. Sam Charmatz and Irving Schertzer will assist Sinclair in program planning.

Highlight of the November 28th meeting was a lecture and demonstration on film splicing by Sinclair, and film program which included: "Junior Does His Bit," by Martin Sternberg; "Horse and Buggy Days," by Charles Ross; "Russian Easter," by George Serebrykoff; an 8mm. clinic film by Mr. and Mrs. Leibowitz; and an outdoor color subject by Jay T. Fox.

Open discussion of the merits of 8mm. in contrast to 16 mm.—or vice versa—provided basis for a most interesting meeting December 5 at the Hotel Bossett, with program conducted by Herbert Erles. Films presented for the Eights were "World's Fair" by Sam Fass, and "Dear Fred" by Herbert Erles; while the Sixteens were championed by "Hubby Finds a Hobby" by Charles Benjamin, and "Mr. Bug Plays Cupid" by Martin Sternberg.

Frank E. Gunnell delivered informative and instructive talk on "Practical Use of the Various Lenses in Movie Work" at meeting held on Dec. 19th; and several films were also on the program.

Utah Cine Arts Club

Ted Pope heads Utah Cine Arts Club of Salt Lake City for 1946, as result of recent election which selected other officers as follows: Pete Larson, vice president; Al Londema, treasurer; Lorraine Olson, secretary; and board of director members including George Brignand, Theo Merrill, Ed Madsen, and LeRoy Hansen.

December 12th meeting of the club, in addition to refreshments to celebrate the holiday season, presented a fine program of films. Subjects included: "Perpetual Motion," by Pete Larsen; "Little Co-Ed," by Mrs. Al Morton; "A Man's World," by Mr. and Mrs. LeRoy Hansen; "Shots of Old Mexico," by Ted Pope, and reel of Flowers by Dr. Stromberg of Ogden Movie Club.

Annual banquet will be held at Hotel Newhouse on January 16, at which time program of prize-winning films will be exhibited.

New York Eight

December meeting of New York Eight Motion Picture Club was held on the 17th at Hotel Pennsylvania, with program including a novelty film by Fred Evans of Hollywood, "Reaping the Raindrops" by Lewis B. Reed and several new subjects of members.

Westwood Movie Club

December 8th meeting of Westwood Movie Club, San Francisco, was mainly devoted to election of officers for 1946. Nominating committee, with endorsement of the executive committee, presented slate as follows: president, Fred Harvey; vice president, W. C. Johnson; secretary, Leo M. Kerkhof; treasurer, Larry Duggan.

Evening's program of prize winning pictures comprised: "Christmas Well Spent," by J. Allen Thatcher; "My Master and I Go A-Romping," by Donald Day; "The Careless Heiress," by Eric Unmack; "The Water Ouzel," by Rudy Arfsten; "Amphibious Attack," by Andy Colner; and "Hail British Columbia!" by Leo J. Heffernan.

January meeting on the 26th will be a dinner affair at the Del Mar Restaurant for installation of the new officers.

Syracuse Movie Makers

This progressive organization is now on the hunt for new permanent quarters for move by February 1st, and until other location is found, corresponding secretary D. Lisle Conway advises that all communications should be addressed to Syracuse Movie Makers Association, 44 West Calthrop Ave., Syracuse 5, New York, N. Y. Present clubrooms are being vacated due to raise in rent which is not justified in view of the restricted space and facilities available for the members.

Cinema Club, San Francisco

E. L. Sargeant has been elected president of the Cinema Club of San Francisco for 1946, succeeding Charles D. Hudson. Other officers selected include: L. J. Duggan, vice president; Rudolph W. Arfston, secretary; Lloyd Littleton, treasurer; and directors at large, Leon Cagne, Dave Redfield, and Hudson.

Special Christmas dinner meeting was staged for the December meeting on the 18th, with fun generated through contribution of novelty gifts not exceeding two bits in cost for Santa's sock and later presentation to the members present. Appropriate holiday pictures were also shown.

La Casa Club

D. M. Gardner was chairman of the December 17th meeting of La Casa Movie Club of Alhambra, California. Film program of the evening included several 16mm. subjects: "Nativity Scene," by Mrs. R. Gillmann; "A Montana Garden," by Dr. Elsie Schildwachter; "Fiji, Espirtu and Santo," by Lt. Commander J. A. Biren; and "Mexico, 1945," by Guy Nelli.

Metropolitan

Special Christmas program was presented at the December 20th meeting of Metropolitan Motion Picture Club at Hotel Pennsylvania, with 16mm. kodachrome films shown including: "Mohawk Pals," by Frank E. Gunnell; "Reflections," by Henry E. Hird; and "Snow on the Mountain," by Robert P. Kehoe. J. Christian Vogel recited his own composition, "The Tale of a Christmas Tree."

Supplemental meetings of Metropolitan, devoted to discussions of various techniques of cinematography and practices, are finding growing enthusiasm among the members.

Leo Heffernan won first prize of \$75 in Metropolitan's general contest for his "Land Snakes Alive." Second prize of \$50 went to George Mesaros for "Pointless Foray;" while Sidney Moritz received third prize of \$25 for "Windjammer."

L.A. Cinema Club

Annual banquet of Los Angeles Cinema Club will be held Monday night, January 7, at the Los Angeles Breakfast Club to get the organization off to a fine start for 1946 activities. Awards will be announced for winners in the film contest, and the prize-winning subjects will be exhibited.

December meeting was held at the Ebell Club on December 3rd, with member Harry C. Chapman presenting the film program with two of his color subjects with sound recordings—"Hawaii Calls," and "Canada Holiday."

Tri-City Cinema Club

Tri-City Cinema Club of Davenport, Rock Island and Moline, held its sixth annual Christmas banquet Friday, December 14th, at Davenport Chamber of Commerce building, with more than 100 members and friends attending.

Program of the evening included short talks by members on interesting or difficult shots experienced in photography; pictures of the past three banquets; and a 16 mm. Kodachrome subject, "Music," which was composed by Harry Lytle and three departments of the Davenport High School.

January meeting of Tri-City will have "Flowers," by Marvin Russell; and "Autumn and Spring," by Miss Georgia T. First. Symposium on movie films is also on the program.

Color Experts Check Agfa Plant

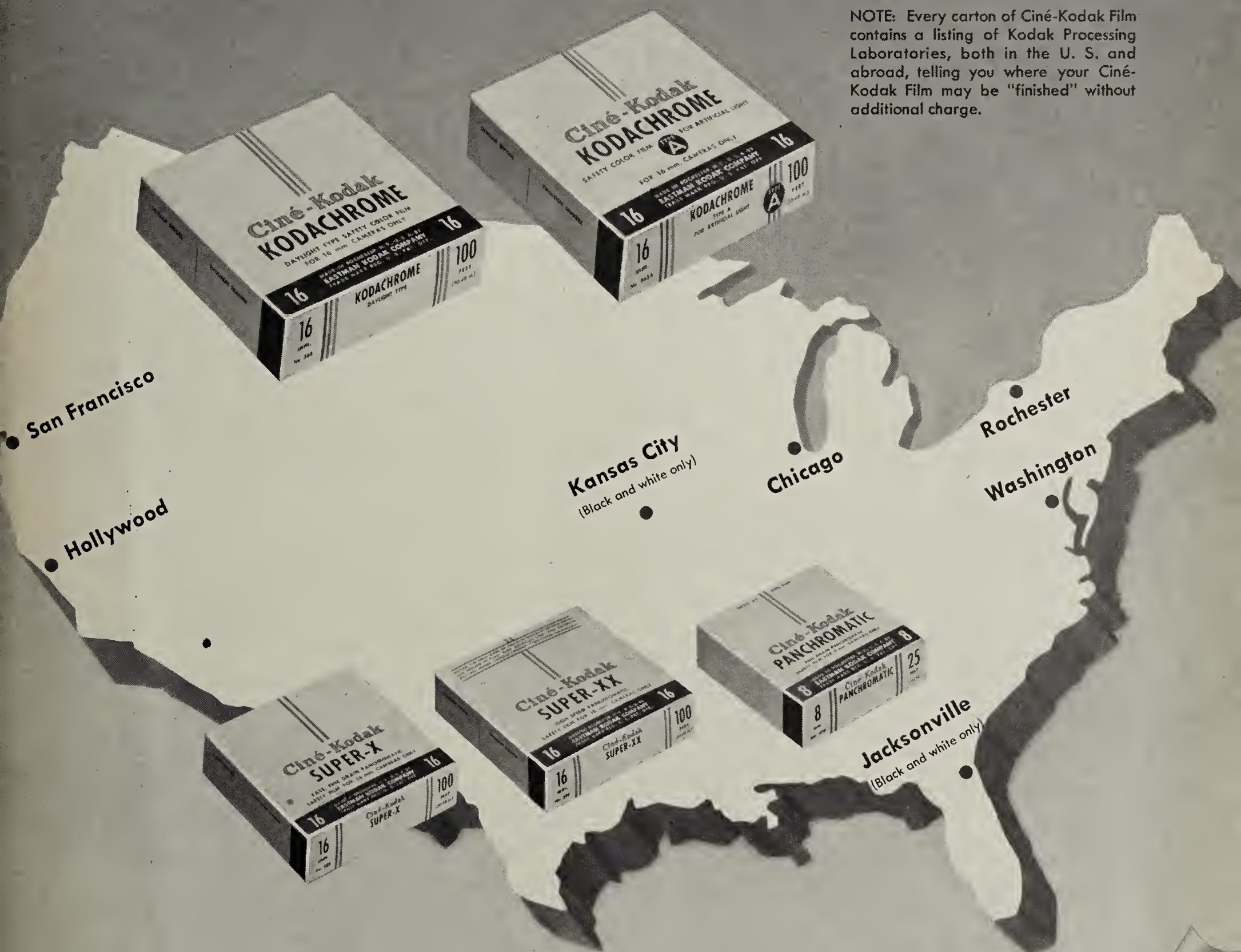
Group of American film engineers and technicians are currently in Germany checking all phases of manufacture and processing of Agfa color film. Contingent went abroad under wing of Department of Commerce.

Good to Know—NOW THAT MOVIE-MAKING TIME IS BACK—

Kodak offers “coast-to-coast”

processing of Ciné-Kodak Film

NOTE: Every carton of Ciné-Kodak Film contains a listing of Kodak Processing Laboratories, both in the U. S. and abroad, telling you where your Ciné-Kodak Film may be “finished” without additional charge.



EASTMAN KODAK COMPANY

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Kodak

Automatic Focus Devices

(Continued from Page 9)

lock type motors to transmit the movement of the dolly to the photographing lens. As can easily be seen, this does not restrict the movement of the camera in any way. The only connection between the receiver motor and lens assembly, and the motor which is activated by the cam and gear assembly, is a flexible cable containing only the motor wires. Hence, it can be seen that the camera may be tilted up or down or panned to right or left without any hindrance whatsoever.

A standard Mitchell camera is used

on the unit, which is equipped with a 50-mm Bausch & Lomb *Baltar*, *f/2.3* lens in a standard Mitchell lens mount. To the lens mount a ring gear was mounted which is meshed with the control gear of the receiver motor assembly. The 50-mm lens can be focused automatically from 50 feet to 18 inches. Within these limits, no matter where the dolly is moved or at what speed it is moved, the lens is always automatically held in sharp focus.

The benefits derived from this unit are numerous. One advantage of its use has been a great saving in both time and labor. Before the unit was in operation it was necessary to use as many as six men to complete a difficult follow shot. In some instances scenes of this nature required a camera operator, and assistant cameraman to change focus, one or two men to push the dolly, a fifth man to call out footage marks usually marked on the floor, and possibly a sixth man to carry the camera motor cable back and forth as the dolly was moved. As mentioned before, the common practice was to photograph the scene many times hoping that at least one of the "takes" all of the technicians connected with the scene had coordinated and synchronized their operations correctly. This, of course, required a great amount of time, an abnormal waste of film, and usually a crew of from four to six men. With the use of the automatic electric dolly most of these disadvantages were eliminated. No matter how difficult the scene, the unit requires the use of only two men—the camera operator and the dolly operator. The only function of the camera operator is to start and stop the camera and to operate the pan and tilt head if this should be necessary. The dolly operator controls the movement of the dolly, and all other necessary operations are performed automatically.

Since the unit has been in use it has been found that there are few occasions where it is necessary to make more than one take of the scene. The saving in film because of this advantage can be recognized at once.

In conjunction with the development of the automatic follow-focus electric camera dolly, a similar device was developed to accomplish the same results on a permanently installed Insert and Title Stand. (See Fig. 4). In many cases it was found to be more convenient to mount certain maps, titles, and other special objects on a title board which was placed in an upright position and attached to a lathe bed. The camera was mounted on a movable pedestal which in turn was mounted on a smooth raceway. This raceway was substituted for the original lathe rack and constructed in such a way as to permit the camera to be moved back and forth on it. When the unit was put into use, approximately the same problems presented themselves as before. It was even more difficult to change focus accurately when moving the camera, for

the shots made with this unit usually required a higher degree of accuracy both in focusing and framing. It was necessary to design the equipment in such a manner so as to allow the 3 inch camera lens to approach the title board or target as close as 12 inches.

Because of the complex nature of certain shots, it was also decided that there would be a distinct advantage in being able to move the title board automatically in either a horizontal or vertical direction. To accomplish these features, the unit was reconstructed in the following manner.

The title board part of the installation is made to move in a horizontal and vertical direction by means of two Bodine speed reducer-type animation motors. One of these motors powers the horizontal movement, the other the vertical. The single frame feature permits small precise moves for straight or animation work. The reversing switches provide directional control. The speed adjustments allow speed control for board movements. Both motors are geared down by 12 to 1 reducer boxes. This smooths out the movements and gives proper basic speed. The follow focus is effected by mounting a contour strip, complementary to the linear movement of a three inch rack type of lens along the side of the lathe bed. A small ball-bearing roller makes contact with this contour. A shaft connects the roller bearing to the shaft of a Diehl-type Selsyn generator motor via reduction gears. The action of the ball bearing as it follows the contour strip activates the generator which electrically transmits identical turns to the receiving Selsyn motor's shaft. On the end of the shaft of this motor, a small gear engages and activates the rack and pinion gear directly attached to the rack lens mount itself.

In the actual practice of cinematography at the Signal Corps Photographic Center, both of these devices have been used with a great deal of satisfaction by the cinematographers who are charged with the responsibility of making these difficult shots. During peak periods of production they have enabled the Camera Branch to complete many different scenes of this type where formerly it was possible to complete only a limited number.

It is felt that this dolly with the automatic focus device could be very successfully utilized in television camera operations because of its remote control and pre-set switch features. Another suggested use for this unit would be in connection with rear projection or process photography where it might be advantageous to dolly the projector in and out during a scene.

The writers wish to express their appreciation to the Pictorial Engineering and Research Laboratory Division and the Central Machine Shop Branch of the Signal Corps Photographic Center for their cooperation and valuable assistance in the design and construction of these devices.

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FITTING A FILM TO MUSIC

By HAROLD RAWLINSON

SOONER or later the amateur movie maker will feel the urge to make a serious film. I suppose most of us pass through the same school in gaining our experience. Starting with the family—long-suffering and willing models—we progress to a film about our dog and cat, then on to the holiday record at the seaside, the tour with the car, the local sports, the carnival, and, if we are lucky, a record of some historical event like a jubilee or a coronation.

You have probably added other subjects to your personal library of home-made films. In making these subjects we were working along conventional lines most of the time. The structure of the film is more or less established by the sequence of events, but the treatment and the way we handle the subject can be as varied as the pebbles on the beach. In this article I want to suggest a new angle of approaching the making of a film—at least it will be new to the majority of amateur movie makers.

Today, no serious cine enthusiast would think of showing his silent films without a musical background added by means of gramophone records and amplifier. Even then, with twin turntables and a selection of hundreds of records from which to choose, the result will always be a makeshift. Why not, then, make a film to fit a particular piece of music? By doing this there would be tremendous scope for our imagination, and although Walt Disney has shown us how it can be achieved in an animated cartoon ("Fantasia"), the possibilities in the use of straight photography are endless.

Hundreds of musical compositions would lend themselves easily to filmic treatment—and this need not in any way be injurious to the music. Artistically and sympathetically handled, the music will—in most cases—become more interesting to the majority. A few "purists" might object—but these gentlemen may never see your films, so they will not suffer any sleepless nights. Well, then, what about the choice of subject?

Good music will demand a good film. Do not vulgarize a masterpiece by fitting a frivolous idea. First-class poetry requires first-class music—and we must not cheapen another man's work. Decide on the piece of music you are going to illustrate photographically—then let the subject gradually take shape in your mind, blossoming out into a complete film in perfect sympathy and mood with the music. Choose something good, and aim high. You very soon tire of poor

music. Remember always that the idea which you are going to put in your film must keep to the rhythm of the music. A slowly unfolding idea cannot be set to music which is full of short phrases and melodies; in this case we should want our music to flow on—un-ending.

You need not be a practical musician, and knowledge of musical theory and harmony will not be a necessity, although an advantage. As long as you have an artistic feeling and a sense of

the fitness of things the results should be good. Undoubtedly Walt Disney has been the greatest fitter of films to music—something quite different from fitting music to films. The progress achieved from some of his early Silly Symphonies to the masterly episodes in "Fantasia" is remarkable. Such works as a Beethoven Symphony and Mouskorsky's "A Night on a Bare Mountain" were not cheapened by being the inspiration of Disney's work.

There have been many beautiful ballets arranged to music which was never intended to be used in a choreographic setting. A Symphony by Haydn, a movement from Mendelssohn's Violin Con-

(Continued on Page 29)

□ □ □ □ □ F O N D A □ □ □ □ □

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This article appeared in Nov. 16, 1945, issue of "The British Journal of Photography", and is reprinted by permission.

Using Your Movie Camera As A Motion Picture Step Printer

By JAMES R. OSWALD

Few amateurs are aware that in their own movie camera, whether 8 or 16mm, providing it isn't of the magazine loading type, they have the facilities not only for making copies of cherished movies, but for making prints from negative films, as well. Without any alterations whatsoever to the camera, it is made to serve as a simplified version of a motion picture step printer, by merely following the few, easy steps outlined here.

The process requires that the two films, the original and the unexposed, be run through the mechanism in contact, and exposed to a light source. The loading operation is carried on in the darkroom, where both films are spooled together on the supply reel, emulsion to emulsion, in such a way that, when threaded, the shiny side of the original will be nearest the lens. Threading is done as usual, with the exception that larger loops are left in the original film, to prevent jamming. Before replacing camera cover, run off a few frames, making sure that the sprockets properly engage both thicknesses of film.

Any length scene up to one-half the capacity of the camera may be handled with one threading.

Exposures may be made either indoors or out, although artificial light is preferred, since it is more uniform, and therefore more easily controlled. An ordinary 7½ or 10 watt lamp placed 8 or 10 inches from the camera provides plenty of illumination under average circumstances. There are a number of variables that enter into selecting the proper lens stop to use, such as the density of the original film, speed of the unexposed film, operating speed of the camera, and of course, distance from lamp to lens, and intensity of the lamp, itself, and for this reason it is necessary to determine by actual test the proper setting under the conditions with which you will operate. Once these factors are established, however, if they are permitted to remain constant, no difficulty will arise in trying to duplicate results, especially if some sort of a table is set up to use as a guide. For a starting point upon which to conduct first experiments, select a film of normal density,

and use in connection with a medium lens stop.

Outdoors, the camera may be pointed at the blank sky, or aimed toward a clear white card reflecting the direct rays of the sun. As in the case of artificial light, there are a number of things to be taken into consideration here, too, in determining correct exposure, with the addition of the constantly changing conditions encountered in natural light. All this not as a word of discouragement, but rather to forewarn the enthusiast of the pitfalls to avoid.

As to the most suitable type of film to use, generally speaking, the slower the speed, the better. As a rule, most slow emulsions are finer grained, which is very much desirable in movie films, and since motion picture printing doesn't require extreme sensitivity anyway, are ideal from this angle, to say nothing of the economy standpoint.

Perhaps the most economical of all, and certainly the easiest to handle in the darkroom, is the ordinary "positive" type film, for those who can content themselves with black and white pictures, since it is made expressly for laboratory work, and sells for \$1.00 per hundred feet, in 16mm size, not including developing, however. Developing may be done by any one of a number of independent processing laboratories for an additional charge of approximately \$1.00, since, although the film

(Continued on Page 30)



1. (above) The operation is carried on in the darkroom where both films are spooled together on the supply reel, emulsion to emulsion; in such manner that—when threaded—shiny side of original will be nearest lens. (Dark colored film represents the original; light colored the unexposed stock).

2. (Upper right) Look closely and note difference in loop sizes between the two films. Thread as usual, with exception that larger loops are left in original film, to prevent jamming. Before replacing camera cover, run off few frames to insure sprockets engage both thicknesses of film.

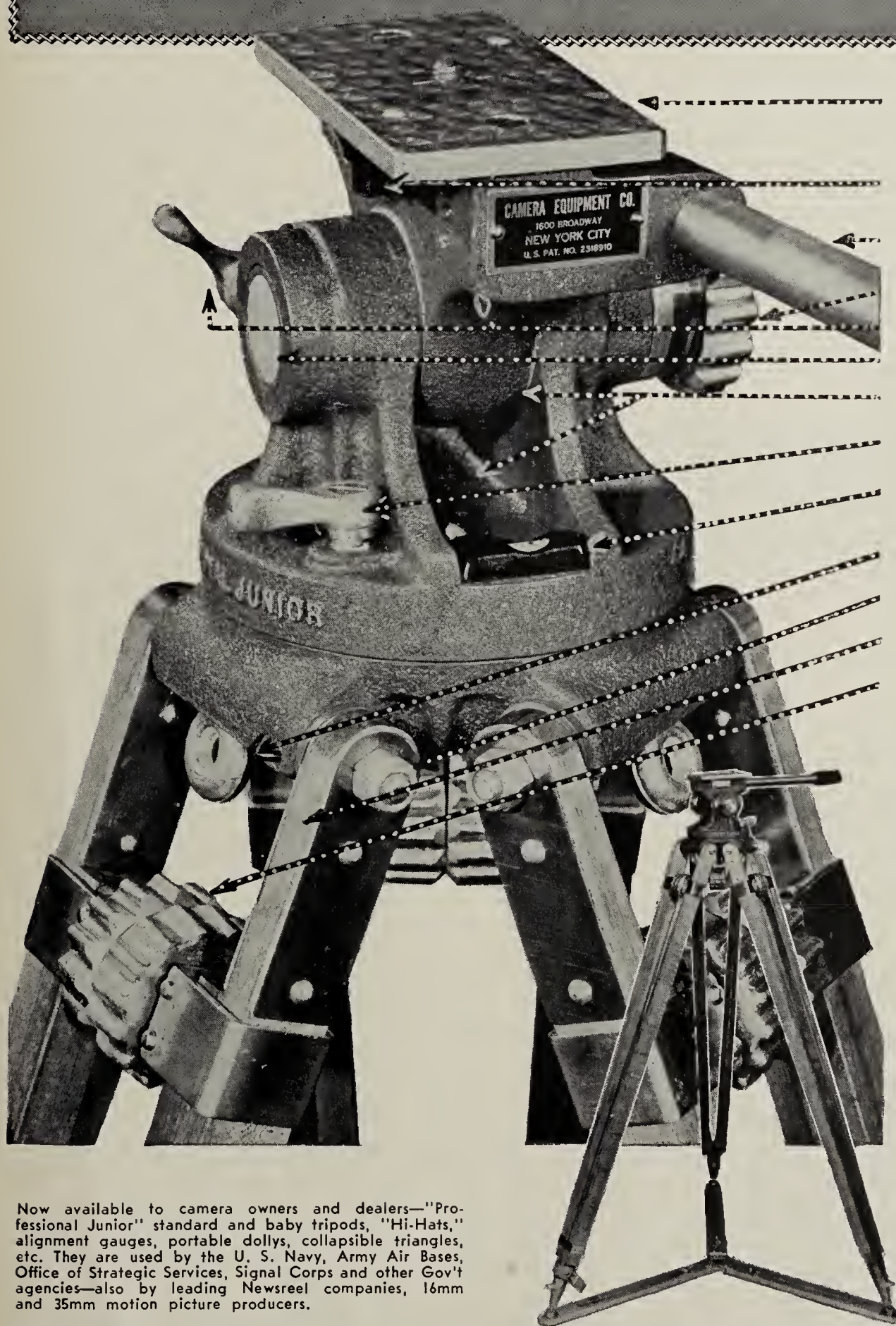
3. (Right) Exposures may be made either indoors or out, although artificial light, more uniform for easier control, is preferred. Ordinary 7½ or 10 watt lamp 8 or 10 inches from camera provides sufficient illumination on average.



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Sixteen Goes Hollywood

(Continued from Page 12)

sixteen at Rockett Productions. These were shot with a Cine-Special to which has been added many Hollywood gadgets, such as automatic dissolve mechanism, Mitchell Finder, Magnified image on ground glass for better composing. The results were very good but we needed four hundred foot magazines at various times. On that job we shot everything including special effects and titles combined with live action, and animation combined with live action, which was accomplished with short lap dissolves giving a very unusual effect. In one sequence a man paints with a dry brush and all the colors of the rainbow flow from it as he paints. Many glass shots combined with live action were used in sixteen color with excellent results.

Sixteen production will undoubtedly grow larger in the major studios in 1946, to supplement their thirty-five standard size. If such films are never released in the United States, many will find eager audiences all over the rest of the world. American documentary and propaganda films should certainly be made that the rest of the world might know us better. In exchange we have a tremendous sixteen consumption of foreign films of commensurate quality, which opens a new field for the American Professional Cinematographer, especially A.S.C. members who are known in all foreign lands

from their credits on the Hollywood product.

Thirty-five films are limited to theaters, whereas sixteen film has a ready market throughout the world. One has only to look in a few of the many magazines devoted to Industrial, Lecture, School, Business and Advertising films to see the opportunities. My earnest hope is that Hollywood goes as thoroughly for sixteen as sixteen is "GOING HOLLYWOOD."

Gadget Auctions for Added Club Interest

That regular gadget auction of the Cincinnati Camera Club, founded in 1884 to rate as the oldest photographic group in this country, should give officers and program chairmen of amateur cine clubs an idea for incorporation in meeting programs two or three times yearly which can generate plenty of interest among members.

According to an Associated Press story of several weeks ago, the Cincinnati club conducts a gadget auction periodically, with members bringing along discarded or unwanted photographic materials or supplies for bidding by other members. The event has become an integral part of club affairs, and practically every member brings along some piece of photographic material to go on the auction block—and in turn, he picks up something else that he has wanted to try out for a long time.

NOTES ON SPLICING

By FRANCIS SINCLAIRE

President, Brooklyn Amateur Cine Club

The process of joining two films together by using film cement is generally believed to be the gluing or cementing together by the use of an adhesive substance. This is incorrect. The film cement actually softens the acetate base of the film and when joined with the other piece under pressure the result is similar to a weld. A perfectly-made splice should be just as strong as the film itself.

There are two methods of removing the emulsion before applying the cement. One is the dry splice and the other the wet splice. For the dry splice the emulsion is removed with a file-like implement which scrapes off the emulsion. With the wet splice, water is used with a suitable scraper to soften and remove the emulsion. The dry splice is more popular and is considered to be superior. The wet method's chief drawback is that it is likely to buckle the film; also the cement will not soften the base properly if too much moisture is present. With the dry splice, care must be taken to see that the file does not cut too deeply, and that the emulsion is removed evenly.

Frank Gunnell Wins Maxim Award

Frank E. Gunnell, fellow of the Amateur Cinema League and prominent member of Metropolitan Motion Picture Club of New York, won the Hiram Percy Maxim Memorial Award for 1945. Winning entry was Gunnell's "While the Earth Remaineth."

New Filmosound Library Features Announced

NORTH STAR (11 reels)

Samuel Goldwyn's first 16mm. release—an epic film of the "little" people of a peaceful Russian village, over-run by ruthless invaders, and the final triumph of right and humanity. (Anne Baxter, Dana Andrews, Walter Huston, Ann Harding. Story by Lillian Hellman, direction by Lewis Milestone).

ALLERGIC TO LOVE (Universal) (7 reels)

Romantic comedy with modern scene that assures countless laughs. Matrimonial and business merger between airplane and motor families periled by comic allergy, finally routed in very funny surprise ending. (Noah Beery, Jr., Martha O'Driscoll, David Bruce). Available from January 21, 1946 for approved non-theatrical audiences.

CATCHING CROCODILES (10 min.)

Methods of trapping and netting crocodiles. Includes both fresh water and salt water species, nests, eggs. (Produced in Australia).

New Orthicon Television Tube

(Continued from Page 7)

images from interference due to exploding photo flash bulbs and other sudden bursts of brilliant light.

4. Smaller size of tube, facilitating use of telephoto lens.

5. Type of design that lends itself to use in lightweight, portable television camera equipment.

6. Improved gain control system that provides unvarying transmission, despite wide fluctuations of light and shadow.

How the Tube Works

Resembling a large tubular flashlight in size and appearance, the advanced development model of the Image Orthicon has an overall length of about 15 inches, with the shank about two inches in diameter and the head about 3 inches in diameter and 3 inches long. It has three main parts: An electron image section, which amplifies the photoelectric current; an improved Orthicon-type scanning section, smaller and simpler than those built before the war; and an electron multiplier section, the function of which is to magnify the relatively weak video signals before transmission.

The principle which makes the new tube super-sensitive to low light levels is similar to that which enables RCA's multiplier phototube to measure starlight. This principle, known as secondary electronic emission, involves the use of electrons emitted from a primary source as missiles to bombard a target or a series of targets, known as stages or dynodes, from each of which two or more electrons are emitted for each electron striking it.

Light from the scene being televised is picked up by an optical lens system and focused on the photo-sensitive face of the tube, which emits electrons from each illuminated area in proportion to the intensity of the light striking the area.

Streams of electrons, accelerated by a positive voltage applied to a grid placed directly behind the photo-sensitive face and held on parallel courses by an electromagnetic field, flow from the back of the photo-sensitive face to a target. Secondary emission of electrons from the target, caused by this bombardment, leaves on the target a pattern of varying positive charges which corresponds to the pattern of light from the scene being televised.

The back of the target is scanned by a beam of electrons generated by an electron gun in the base of the tube, but the electrons making up this beam are slowed down so that they will stop just short of the target and turn back until it again approaches a positively charged section.

The returning beam, with picture information imposed upon it by the varying losses of electrons left behind on the target, is directed at the first of a

series of dynodes near the base of the tube; secondary electrons "knocked out" of this electrode by the bombardment strike a second dynode, and this process continues, with the strength of the signal multiplying at each stage until it reaches the signal plate and is carried out of the tube through an external connection.

Men Who Developed the Image Orthicon

Credit for the tube's development goes to three members of the RCA research staff: Dr. Albert Rose, Dr. Paul K. Weimer, and Dr. Harold B. Law. The project is a continuation of RCA Laboratories' work on the pick-up tube over the past 20 years under the direction of Dr. V. K. Zworykin, associate director of RCA Laboratories. During part of that period, the work was headed by B. J. Thompson, associate director of the laboratories, who was killed in action overseas in July, 1944, while on a special mission for the Secretary of War.

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Santa Anita Track Contracts Telefilm

Santa Anita racetrack has signed contracts with Telefilm whereby latter will photograph all of the races via the Telefilm control system as originally used last summer at Hollywood Park. Films in 16 mm. size, are shot of every foot of a race from special camera towers spotted around the course and the individual clips are developed and assembled within 10 minutes for photographic viewing of each race by the judges if necessary.

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Current Assignments of A.S.C. Members

As this issue of AMERICAN CINEMATOGRAPHER goes to press, A.S.C. Directors of Photography are assigned to the following feature productions:

Columbia Studios

Joseph Walker, "The Al Jolson Story" (Technicolor).

Charles Lawton, Jr., "The Walls Came Down" with Lee Bowman and Marguerite Chapman.

Metro-Goldwyn-Mayer

Charles Rosher, "The Yearling" (Technicolor), with Gregory Peck and Jane Wyman.

Les White, "Army Brat" with "Butch" Jenkins.

Ray June, "But Not Goodbye," with Frank Morgan and Keenan Wynn.

Charles Salerno, Jr., "Faithful in My Fashion," with Donna Reed, Tom Drake, Edward Everett Horton, and Spring Byington.

Sid Wagner, "Fiesta" (Technicolor), with Esther Williams and John Carroll.

Hal Rosson, "Three Wise Fools," with Margaret O'Brien, Lionel Barrymore, Lewis Stone, Edward Arnold and Thomas Mitchell.

Monogram Studios

Ben Kline, "Joe Palooka, Champ," with Joe Kirkwood, Elyse Knox, Leon Errol, Joe Louis.

William Sickner, "Charlie Chan at Alcatraz," with Sidney Toler.

Paramount

Ray Rennahan, "California" (Technicolor), starring Ray Milland, Barbara Stanwyck, Barry Fitzgerald.

Lee Garmes, "The Searching Wind," (Hal Wallis Prod.), with Robert Young, Sylvia Sydney, Ann Richards.

RKO Studios

Harry Wild, "Till the End of Time," with Dorothy McGuire, Guy Madison, Bob Mitchum, William Gargan, Harry Von Zell.

Milton Krasner, "Without Reservations" (Jesse Lasky Prod.), starring Claudette Colbert and John Wayne.

Robert De Grasse, "Crack-Up," with Pat O'Brien, Claire Trevor, Herbert Marshall and Wally Ford.

Ted Tetzlaff, "Notorious," starring Cary Grant, Ingrid Bergman.

George Barnes, "Sister Kenny," with Rosalind Russell, Alexander Knox, Dean Jagger.

Frank Redman, "Step By Step," with Lawrence Tierney and Anne Jeffreys.

Republic Studios

John Alton, "One Exciting Week," with Al Pearce and Mary Treen.

20th Century-Fox

Ernest Palmer, "Three Little Girls in Blue" (Technicolor), with June Haver, Vivian Blaine, George Montgomery, Frank Latimore.

Harry Jackson, "Strange Triangle," with Signe Hasso, John Sheppard, Anabel Shaw.

Leon Shamroy, "The Shocking Miss Pilgrim" (Technicolor), starring Betty Grable and Dick Haymes.

Arthur Miller, "Anna and the King of Siam," starring Irene Dunne and Rex Harrison, with Linda Darnell and Gale Sondergaard.

Norbert Brodine, "Somewhere in the Night," with John Hodiak, Nancy Guild, Lloyd Nolan, Richard Conte.

Joe MacDonald, "The Dark Corner," with Lucille Ball, William Bendix, Mark Stevens, Clifton Webb.

Joseph La Shelle, "Cluny Brown," with Charles Boyer, Jennifer Jones, Helen Walker, Sir Aubrey Smith.

United Artists

Bob Pittack, "The Sin of Harold Diddlebock," with Harold Lloyd, Frances Ramsden, Raymond Walburn, Rudy Vallee, Edgar Kennedy.

Lucion Andriot, "The Strange Woman," with Hedy Lamarr, George Sanders, Louis Hayward, Gene Lockhart.

Universal

Joseph Valentine, "Genius in the Family" (Skirball-Manning Prod.), starring Myrna Loy, Don Ameche.

Woody Bredell, "Notorious Gentleman," with Kent Taylor and Virginia Grey.

Warner Brothers

Sol Polito, "Escape Me Never," starring Errol Flynn and Ida Lupino.

Wesley Anderson, "The Beast With Five Fingers," with Robert Alda, Andrea King, Peter Lorre, J. Carroll Naish.

Arthur Edson, "Two Guys From Milwaukee," with Dennis Morgan, Jack Carson, Joan Leslie, S. Z. Sakall.

Ernest Haller, "Humoresque," starring Joan Crawford and John Garfield; with Oscar Levant, Ruth Nelson.

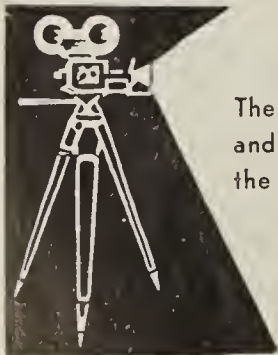
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Fitting Film to Music

(Continued from Page 23)

certo, a Sonata by Liszt, a Symphony by Tchaikowsky, are just a few of the many which come to mind.

There is no reason at all why we should not take a piece of music and build up a photographic picture or story upon its framework.

Here are some practical suggestions which can be taken as some indication of the possibilities of making a film to fit a record.

Sibelius. Prelude to "The Tempest"

A wonderful piece of pictorial writing. An abstract film fitted to this would be a joy to make.

(Shots: Wind swept trees, bending grasses and scattering leaves, falling branches, swirling smoke. The music paints the picture of a fierce gale, but just before the close of the music the tempest subsides and there is a most moving picture in tones of the desolation which is left in the wake of the storm. The camera could easily show the pathos of a fallen tree, the limb of an old oak torn from its body by the force of the wind, the heaped-up pile of leaves, the damaged gate, and so on.)

In a simple way a most moving film could be created to this Sibelius Prelude.

Bach. Prelude in E flat Minor (Vol. 1, No. 8)

This is such a noble piece of music that only the most inspiring subject could be linked with it. A photographic study of a great cathedral—the camera to tell the story as our own eyes would silently take in the beauties of the glorious pile. (Do not use any sub-titles during the Prelude.)

Honegger. "Pacific 231"

A picture in sound of an American stream-liner. What a magnificent opportunity for someone to add a musical picture to this most stirring rhythmic piece of music.

Delius. Summer Night on a River

A most delicate poem in music. Would want very careful treatment; but the camera used imaginatively could produce a delightful film.

Delibes. Scarf Dance

If you know the mistress of a ballet school or dancing class, suggest that you film the students. See that the dance (either the one mentioned above or any other number) is always performed to the gramophone record you are going to use. The timing will then always be the same. (No two performances in the flesh are ever alike.) Take a number of angle shots and enjoy many hours cutting and editing your film.

Gounod. Funeral of a Marionette

Have any of your friends got a puppet theatre—or do you know of a local puppet theatre club? If so, there is plenty of scope for your camera.

Saint-Saens. Scherzo from Piano Concerto No. 2

An intriguing number which suggests a number of impish subjects.

Liadov. Enchanted Lake

I have visualized a film for this musical gem—but it would be very difficult to do without much time and many disappointments.

Additional Musical Ideas

Here are a few subjects for which appropriate music could easily be found.

The bustle of a rush hour in a town.

The Saturday market.

The movement of water.

The village.

Trees.

Sunday morning in the park.

Water numphs.

Tempo Picture to the Music

Your film will have to have the same form, balance and climax as the music, and nothing will be more intriguing than figuring this out. The possibilities are, of course, endless.

Having decided on the piece of music which you are going to photographically illustrate, play the record through many times. Get the music right under your skin. Then analyze the music mentally; notice how it changes its time, mood and color. Possibly the music will be in one characteristic mood throughout. You will have to get this into your picture—perhaps this would be better described as "atmosphere." If it is a 12-inch record it will probably play for 3½ to four minutes, so get together a hundred feet of 16 mm. film (50 ft. of 8 mm.) of any of your odd shots joined together. (Every worker will soon have plenty of thrown-out footage which can be joined together in any odd way.) Then play the record through while showing your 100 ft. of miscellaneous shots. Make a first rough note as to where the music changes to a different rhythm or to a different melody (all music is built up in some sort of order. Themes are re-

peated and contrasting themes added.) All this should be noted on a chart as a record of the footage. Then, from the scenes jotted down, it will be simple to measure the amount of feet or number of frames required for a particular scene. This is a much better method than timing the scene with a watch—because as you look on the screen you can easily make a mental note of the change. Jotting down the times on a piece of paper as you look at a watch is a difficult job.

Finally, see that you have nice titles. Acknowledge the composer of the music in a subtitle. Explain as much as you can at the beginning. Subtitles in the course of the film will interrupt the flow of the music. Do not start the music until all the titles have been shown. After a little practice at timing the film, you will know just when to gently push the needle (a fibre one!) into the first groove.

(EDITOR'S NOTE: Those who use music for synchronization with a film are cautioned against any public performances of copyrighted musical compositions. According to a representative of American Society of Composers, Authors and Publishers—which controls the licensing for public performance of most popular and classical compositions—numbers on records can be played in conjunction with film in homes or before private groups without incurring copyright violations. However, ASCAP takes the position that any performance of a record for an audience where admission is either direct or indirect, comes under its regulations for licensing. Even reproduction before a movie club comes under copyright performance regulations, according to ASCAP, in that members pay annual dues which are claimed as indirect admissions for showings.)



16-1966 DeVry 16mm sound-on-film projector.

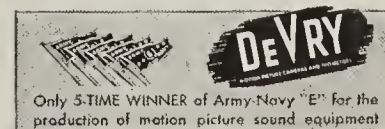


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Camera as Step Printer

(Continued from Page 24)

is put out by all standard manufacturers, such as Eastman, Ansco, and DuPont, none of these manufacturers undertake to process this particular type film.

Color film should not be attempted to be used until satisfactory results with black and white have been attained. To do so is a costly proposition. Black and white, on the other hand, is not only less expensive, and easier to use, but in these troublesome times, is less scarce than Kodachrome, or the newly introduced Ansco color film. (A plentiful supply of "positive" film will be found almost constantly on dealers' shelves, since it is little in demand by the amateur movie maker.)

Limiting oneself to the use of black and white film doesn't mean that a

(Left) The supreme test . . . duplication of a Kodachrome original . . . in Kodachrome. These are actual frame enlargements from a Kodachrome duplicate, printed in the camera.

Kodachrome original cannot be used. Naturally if a person is fortunate enough to "snag" a roll of the precious color film, it is much to be preferred over black and white stock, for use with a Kodachrome original, however.

It goes without saying that the utmost precautions must be taken in the darkroom, for therein lies much of the success or failure of the entire venture. Darkroom illumination must be in accordance with the speed of the unexposed film, ranging from the familiar red lamp for use with "positive" film, to total darkness in spooling Kodachrome. For something different in your field of endeavors, though, try using your movie camera as a motion picture step printer!

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Aces of the Camera

(Continued from Page 10)

director that caused him to learn so quickly and forge ahead so rapidly. While deMille was looking through the finder, Pev would sit on a little box under the camera. From that position he got the director's perspective, and hence learned to anticipate what deMille wanted, and did what was required of him. In three and a half years, Marley rose from the lowly rank of roustabout to deMille's first cameraman, the youngest first cameraman in the business.

He will never forget his first job after that promotion, or the tension under which he worked. The picture was "Feet of Clay," and there were eight cameras on the job, over 600 extras were working, and the harbor was full of yachts. That was his first scene!

As to the toughest job he ever had to tackle for the screen, Pev thinks that easily goes to the crucifixion scene for "The King of Kings." The set, the largest ever constructed, has since been converted into three good-sized stages. Everyone on the set was nervous, and perhaps a little awed by the magnitude of the scene they were shooting, and what it represented. It was not a job to be undertaken casually, or performed haphazardly. "The King of Kings" was the greatest film ever undertaken, and the crucifixion scene perhaps the most difficult assignment ever handed to any cameraman. Psychologically, as well as technically, it was a tremendous challenge.

The problems were many and varied. H. B. Warner, as The Christ, was held to the cross in a manner which became quite painful after a very short time, and so shooting could only be done a few minutes at a time. Then, there was the difficult job of transition from day exterior to night storm. Keyed to each bit of action, the sky had to change from light sunshine through gathering gloom to heavy storm. Over a period of two weeks' shooting, this gradual change in the lighting took place. The finale, when the storm was at its peak, included high winds and lightning. The wind machines fulfilled their role in simulating the proper awe-inspiring atmosphere, but they stirred up dust. And that dust in the air picked up light. But finally, all of those technical hurdles were mastered, and with the help of a switchboard that he had rigged up, plus an elaborate series of hand and foot gestures he had worked out, Marley was able to get the effects he wanted. To say that they were satisfactory, is an understatement.

With the advent of sound, all cameramen found themselves up against new obstacles. Marley was no exception, and it was he who first used a camera blimp to encase the camera and deaden its noise. That was for the picture "Dynamite."

After making that film, Marley went east for a vacation. But instead of re-

turning to Hollywood after a couple of weeks, as he planned, he found himself taking a fling at the stage, by a curious fluke. As a kid he had won 22 dancing trophies, and when he received an offer to headline in vaudeville, the novelty appealed to him and he accepted it. But after a few months, the life of a theatrical performer palled on him, and he headed back for Hollywood, and his own profession.

After free-lancing for awhile, he accepted an offer to work in Paris. He made two pictures there, and two in Budapest, staying in Europe for a year. Marley found the European studios many years behind us, technically, and he introduced many new methods of camera technique, and effected quite a few changes in the laboratory work. He was also the first man to introduce process photography in Europe. Budapest delighted him, he would have stayed longer, but his father was taken suddenly ill and he returned to this country.

After his return, Marley's first job was "The House of Rothschild," for Darryl Zanuck at United Artists. Then, under contract, he went with Zanuck to 20th Century Fox where he worked on such pictures as "In Old Chicago," "Alexander's Ragtime Band," and several others. He also made a screen test for a talented newcomer at that studio, and filmed three of her first pictures. He thought then, and he still thinks, that she as the most beautiful girl he has ever photographed. He didn't marry her though, until after he was in the Army. It was in April 1943, that Linda Darnell became Mrs. Pev Marley.

Not only is she the most beautiful girl in pictures, according to Marley, but she's also a darned good amateur photographer. Better, in fact, than he is. Why? Because he's a professional perfectionist, and for that reason can't relax and take an ordinary, casual snapshot.

Pev's hobbies are fishing, dancing, golf, and swimming. And while he was in the service with the Army Air Force Photographic Unit, he did a lot of flying, and now flying is his latest hobby. Pev enlisted in the army three months before he was classified, and was in about one year. Out of the service, he finished his 20th Century-Fox contract; then moved over to Warner Brothers, where he's made four pictures in rapid succession.

In "Pride of the Marines," there's a scene he's rather proud of, for it combines film shot under three decidedly different conditions, and at different times. Yet it could pass for the same work. Part of the film was actual combat footage taken on Guadalcanal, some of it was shot outdoors on a foggy morning, and the rest was shot indoors on a sound stage.

Pev is happy in his work, and says he would probably make the same choice of a career, if he had it to do over again. He could never be satisfied with a "debit and credit" type of job—his description

of monotonous or routine work. This business may offer headaches, and plenty of problems, but it isn't boring, is his opinion. Photography is variable every hour, and the business produces as versatile a group of people as you'd be likely to find anywhere, he believes.

A good cameraman draws from his past experiences, his artistic ability, his common sense, with a dash of psychology added, and all of it topped off with a sense of humor, is his way of looking at it.

And work? Well, "They are always working on a motion picture set," he says. "When not actually shooting, they are lining up for the next scene. And who are 'they'? Why, the cameramen, of course. Actors and directors get a respite now and then; even grips and electricians get a breather. But the cameraman—never. For 'they' are always busy! But they probably wouldn't change places—even if they could—for any other job in the business."

Paramount Stages 16 mm. Premiere of "Duffy's Tavern" in Chicago

Paramount staged a special premiere of "Duffy's Tavern" in Chicago recently for members of the press and radio at—of all places—Duffy's Tavern in the Windy City. Showing was an exploitation stunt for the picture; but more important, marked the first time that a studio feature had been premiered in 16 mm. form. Pair of Bell & Howell Filmosound 179 projectors were utilized for the performance.

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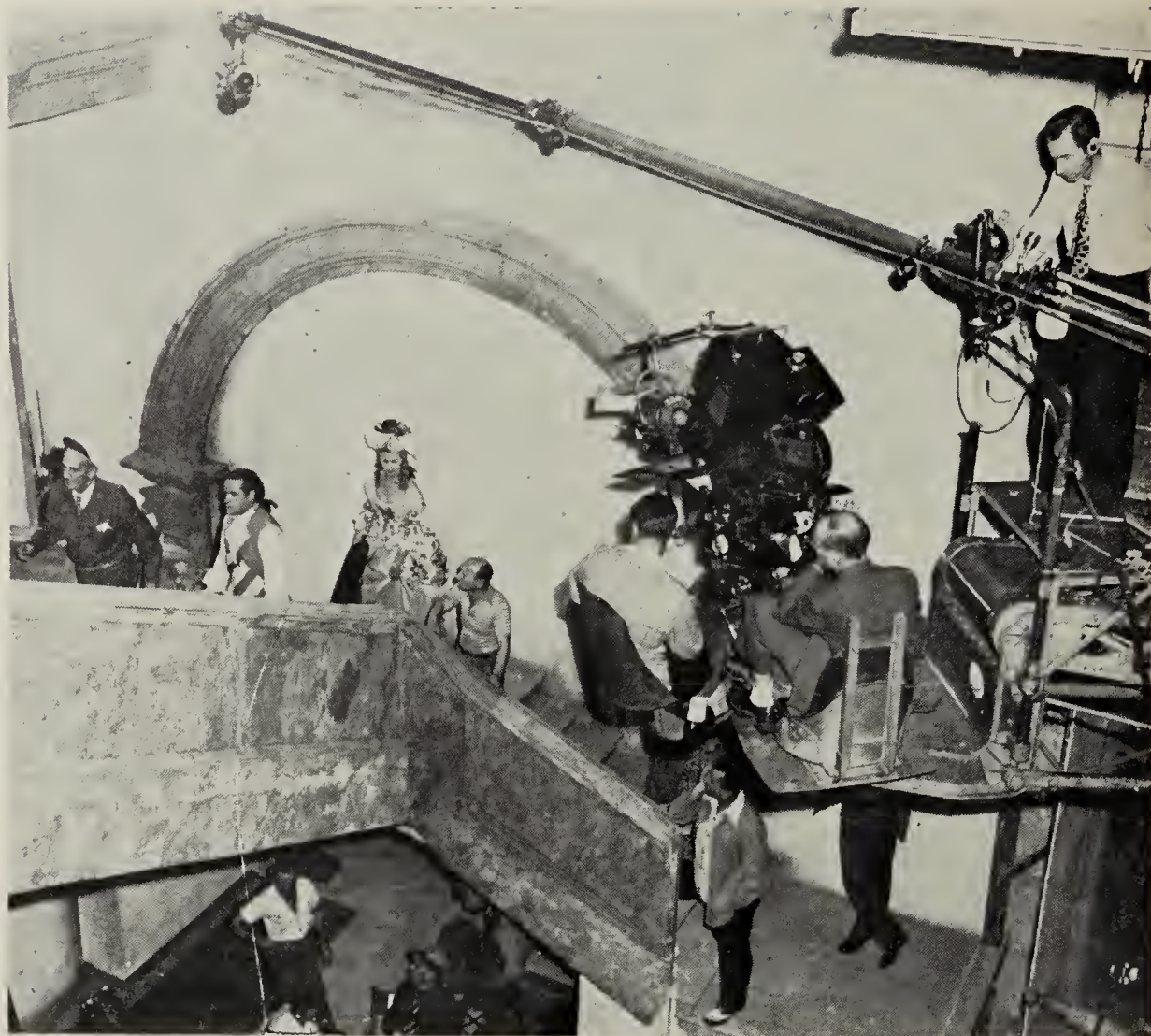
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Director George Marshall rehearses Bob Hope and Joan Caulfield in a stair-walking scene for "Monsieur Beaucaire" at Paramount. For making the shot, camera and sound mike will follow the players up the stairs via movement of camera crane. Lionel A. Lindon, A.S.C., is director of photography on the production.

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A.C. I

Factory Filming

(Continued from Page 16)

my own experience and observation, the only cameraman I have seen do bang-up jobs were those who had the moral courage to subdue their own creative urge and *adapt* their ability to the problems at hand. Why? Because beautiful pictures alone do not constitute a well-photographed training film.

The film must be subjective, not objective. In other words, the audience should be participants and not merely spectators. To achieve this, good composition must, if necessary, be thrown out the window. If one angle will permit better lighting and another a better participating point of view the conscientious cameraman has no choice. He must be willing to leave his own work open to criticism (by those who don't

know) so as to achieve the main objective.

A demand frequently heard by educational cameramen is, "get the worker's point of view." This sounds easy enough. Place the camera at about the average man's height and have the machine's operator cheat a little to one side or the other. But rarely does this give the expected result. The reason is that the camera's single eye is stationary whereas the two eyes of the worker are constantly changing position and focus, even though his head, to all appearances, remains stationary. Actually the head is moving constantly in a series of almost imperceptible pans.

Yet I have seen cameraman Jockey Feindel get shots which solved this problem. He carefully figured out the angle which the audience would recognize as the worker's point of view and set up his camera accordingly. I was directing that opus and squawked loud and long when I saw where he put the camera. But Jockey squawked louder and longer and the results proved that it was fortunate he did so.

On another film, Floyd Crosby, A.S.C., was asked if he could get a "nice, easy long shot" of Lockheed's P-38 assembly line. He looked at his two seniors, four juniors, three "broads" and three baby spots. He muttered a number of things but all that was audible was a very definite "No!" There ensued a one-sided discussion between Floyd and our customer's representative. We've all heard similar discussions, so you won't be surprised that it ended with Floyd making

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the shot while his face went all the colors of the spectrum and a few Dr. Kalmus never heard of. The next day we saw the shot in the rushes. It was beautiful. I never figured out how Floyd did it. I am not too convinced that he knows himself.

It is my conviction that in spite of conditions and obstacles, educational films can be photographically beautiful as well as functional. During production the cameraman is the key man. I have a few suggestions which may make it a bit easier for him to fulfill that role:

1. Together with the script writer, director and gaffer, watch the operation you are going to shoot and become familiar with the job you are going to teach via the screen.

2. Determine the amount of lights you will need, remembering that the producer is probably on a short budget. If he is a legitimate producer he won't mind telling you just how much money he has to work with.

3. Read the script and let the writer clarify any points you do not fully grasp.

4. Together with the director, work out complete story sketches for the job. It doesn't matter how rough these sketches are. The main thing is to make them for the whole picture at once and not just for a day's shooting.

5. Where conditions permit plan for dolly shots so as to come up close on details of an operation without having to cut from the medium or full establishing shot.

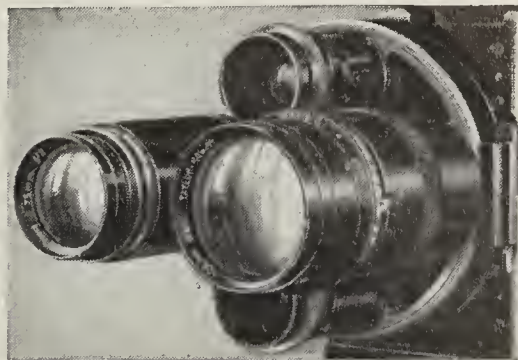
6. Do your diplomatic best to have the factory, or anybody, paint the subject machines. Battleship gray seems the most popular color for best photographic results.

7. If you are working with metal be sure there is plenty of wax on hand to eliminate reflection and halation. Also be certain that the demonstrating worker has plenty of sample pieces to put through his machine during the filming for the several takes which may be necessary. While neither of these points is generally conceded to be the cameraman's responsibility, I think that when shooting begins you'll be mighty glad you checked up on them.

I am only repeating old stuff when I say that educational pictures are going to play an increasingly important part in our national life. They are a challenge to the cameraman's ability. The work is poor in glamor and rich in headaches. But I earnestly believe that any man who has shot a *good* educational can look in his mirror and say, "Well, prune puss, I guess we are a cameraman after all."

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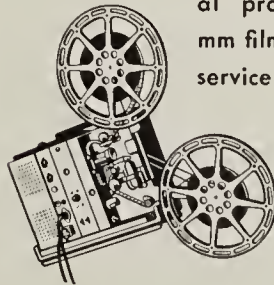
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Review of News

(Continued from Page 14)

tion of features in smaller towns and locations that cannot support the original investment and overhead required for a 35 mm. operation, are currently probing the possibilities of utilizing the economical advantages of 16 mm. size, but still taking measures to prevent projection of the minnie prints on the present 16 mm. machines in private hands.

Best progress has been made on suggestion to use a 20 mm. size printstock—with the same frame size as the present 16 mm., but with the added 4 mm. comprising sprocket holes on other side opposite present ones, to provide double sprocket movement for projectors which would be made by the manufacturers and sold only to regulation theatres that are expected to be opened for operation under the more economical conditions.

The 20 mm. standard proposal is far advanced both in New York and Hollywood. Head offices of the major companies have technical representatives conferring on the matter, while the Academy Research Council in Hollywood is giving the idea a thorough going-over through several of its committees. If the green light is given to the new standard for smaller theatres, many months will elapse before prints will be available. Projection equipment manufacturers will have to tool up for the new professional equipment; laboratories will have to set up developing apparatus for processing the 20 mm. size; and then the 20 mm. prints will be available for the smaller theatres when sufficient number of the latter are ready for operation to justify making quantities of the prints.

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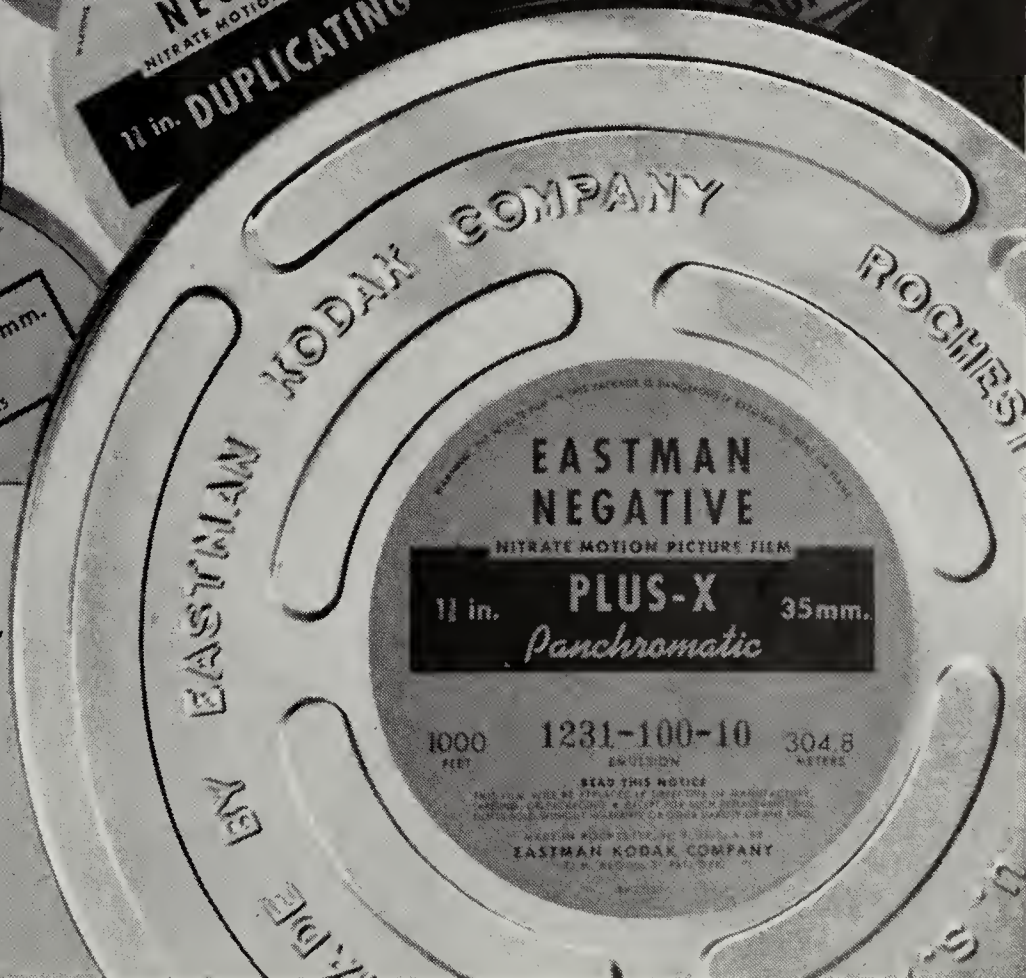
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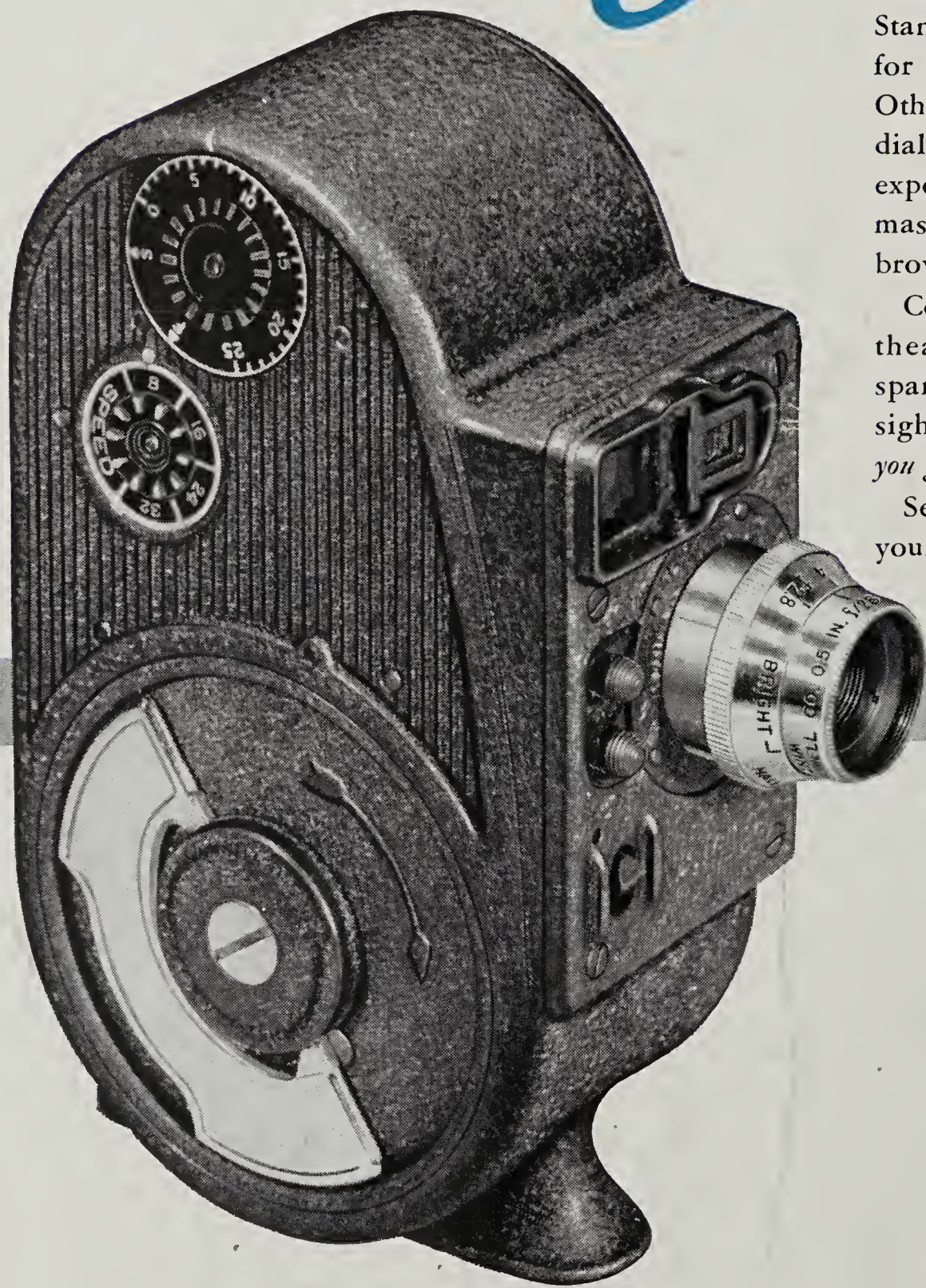
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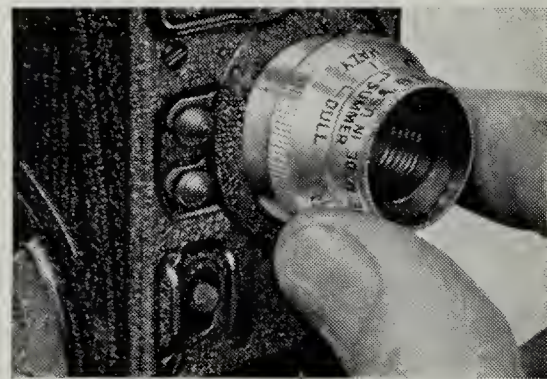


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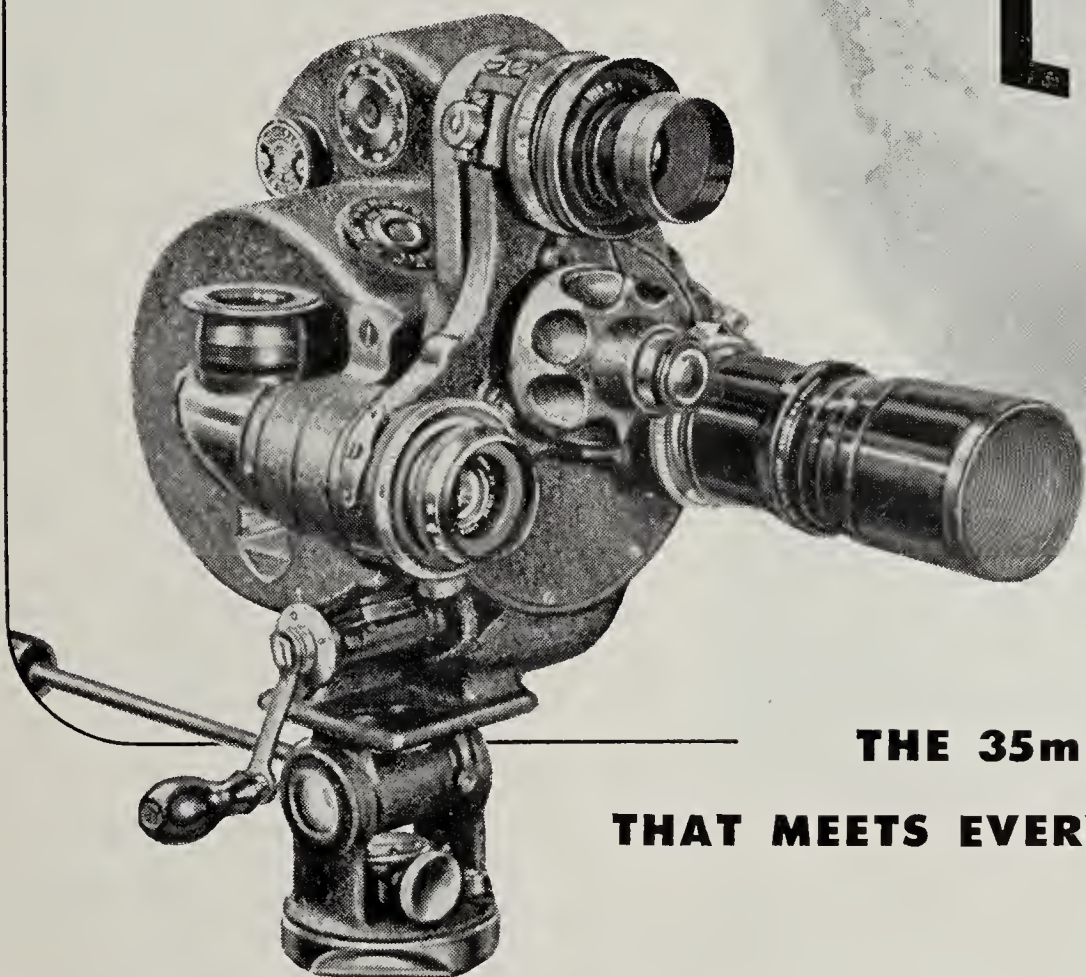
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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

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NO. 2

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ON THE FRONT COVER is a photograph of one of the numerous sweeping locations for the David Selznick production in Technicolor, "Duel In the Sun." King Vidor is director of the \$5,000,000 production. Lee Garmes, A. S. C., is director of photography; with Ray Rennahan, A. S. C., as Technicolor associate. Still by Madison Lacy.



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CINEMATOGRAPHY IN THE WAR



ARMY AIR FORCE TRAINING FILMS WITH CAPT. TOM TUTWILER, A.S.C.

Now that the war is over, the "top secret" and "confidential" activities of various services are off on disclosing intimate details of the importance of cinematography in waging a winning battle over the enemy. In starting this series of "Cinematography at War," articles on the use of motion pictures on the home and battle fronts will be published detailing the experiences of members of the American Society of Cinematographers in various phases of the services.

AAF training films played a most vital part in accelerating the instruction of air force pilots and personnel when speed was essential. Air Force heads early realized the importance of visual

training to supplement class and textbook instruction, and made maximum use of films in the domestic training program.

In presenting various phases of production of AAF training films, the experiences of Capt. Tom Tutwiler, A. S. C., provide a typical history of the motion picture instruction program of that branch of the service. Tutwiler, who received commission of first lieutenant with the original AAF First Motion Picture Unit in February, 1943, entered the service after more than 15 years' experience in Hollywood studios where he mainly worked on special effects photography at Metro-Goldwyn-Mayer. He was promoted to the rank of

Captain while in service.

Captain Tutwiler, who logged more than 1,000 hours of flying time while functioning as a cinematographer with the AAF, estimates that this exceeds the total flying hours of any other AAF cameraman for the similar period of three years. Assigned to head an aerial camera unit immediately, Captain Tutwiler photographed air and ground footage in about equal amounts on his many and varied assignments.

These assignments covered all types of aircraft and models introduced periodically to do specific jobs. Films detailing the flying characteristics and various types of equipment of each model were made to not only intimately familiarize pilots in training in this country, but also to make the new models familiar with the flyers and crews on battlefronts where the new plane would be dispatched for service.

Included in each film as standard footage was picturization of the air performances of the individual types of planes, including maneuverability, take-off, landing, flying characteristics and other features for the knowledge of the pilots in the field and in training.

Small Crew

In handling the assignments, which necessitated location trips to various fields where the different plane models were being tested or flown for the filming, Captain Tutwiler carried a small crew of only one assistant cameraman and one grip. This compact unit capably and efficiently handled the work to be done, although individual fields generally supplied trucks when required during filming operations.

Detailed Scripts Provided

The film project on a new type plane, or instructional picture of various phases of operation was always carefully planned and set up in advance in script form for the cameraman assigned to the job. When a project was requested, the AAF First Motion Picture unit dispatched one or more writers to



Setting up the Bell & Howell camera in waist door of an A-29.

the particular field or base to prepare a suitable script. On this preliminary work, an officer at the base familiar with the film requirements was assigned as technical advisor and liaison to work closely with the writer to familiarize the latter with what was required and to provide necessary technical information and performance features of the plane that was to be the subject of the film.

After the script was okayed by the commanding officers of the particular base, the camera unit was sent along from the Culver City base to launch production. During this period, also, the officer functioning as technical advisor was constantly with the camera unit to advise and assist in the filming.

Cramped Setups on Planes

In his numerous photographic expeditions for the Air Force, Captain Tutwiler covered a territory embracing air bases all over continental United States, and he was also on many filming missions that extended far out over the Atlantic, Pacific and Caribbean waters.

For aerial photography, where the camera plane had to follow the subject plane, Captain Tutwiler continually found himself in cramped quarters. For example, operating the camera from the tail of a B-29 required that he be on his knees for the entire trip. On other occasions, he had to crawl through a plane to the camera position, and then operate while on his side in a prone position. The only time he could stand up and operate the camera comfortably, Tutwiler discloses, was from the turret of an AT-11.

Although shooting was from odd and uncomfortable positions most of the time, Captain Tutwiler discloses that he never photographed through plexiglas—but always out of the nose, tail, waist or turret of the camera planes. This required that the cameraman take a tough beating while shooting; and either winter or summer, the trips were decidedly cold.

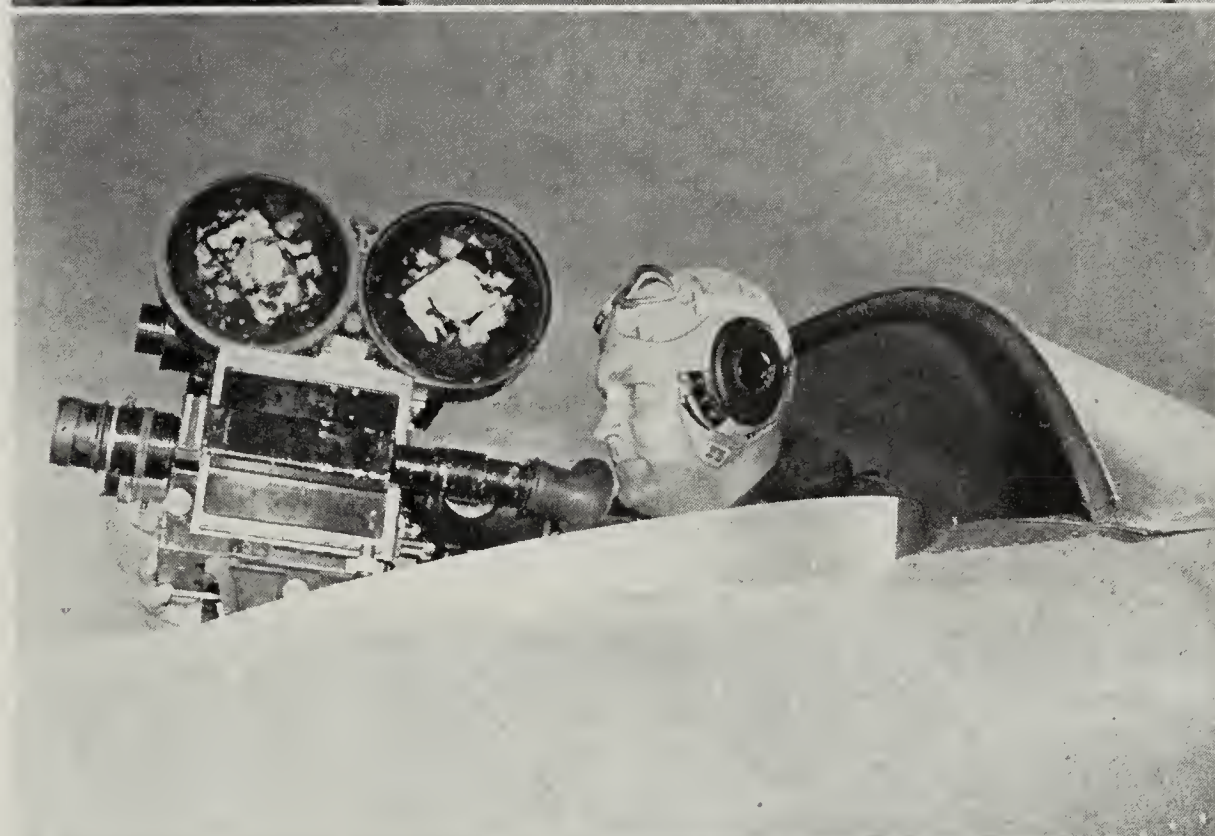
Special Camera Planes

Major Frank Clark was OIC of the Flight Echelon attached to the First Motion Picture unit, and his division supplied the camera ships and pilots for the various film expeditions in all parts of the country. Major Clark had under his command a group of pilot-officers who were experienced in operating camera ships for film production, which resulted in not only better aerial photography overall, but saved immeasurably in production delays that would have existed if unskilled film production pilots had been assigned at each particular field.

Principal types of camera planes used were Lockheed Hudsons and the B-25

(Continued on Page 68)

AERIAL PHOTOGRAPHY CAMERA POSITIONS for AAF training films—top, shooting from turret of an A-29; middle, setup in turret of an A-11; bottom, from the nose of an A-29.



AAF's "Last Bomb" Sensational

"The Last Bomb" is one of the greatest—if not the tops—in the series of actual combat picturizations of the war. An exposition of the details of attack by the B-29 Superfortresses on Japan in the late months of the war, nothing in printed form could more clearly explain the devastation and ruin wrought on the Jap homeland and the impossibility of the Nips continuing to resist, than this epic from the motion picture files of the Army Air Forces.

Members of the American Society of Cinematographers were privileged to witness one of the first—if not the initial—showing, before a semi-public audience on the night of January 21, 1946, at the A. S. C. clubhouse in Hollywood. General consensus was that this was the finest and most spectacular film to be issued from the war activities of the United States forces.

Specific showing was arranged through the courtesy and cooperation of Frank Lloyd, veteran motion picture director and former major in the AAF photographic unit who was recalled from civilian life to function as director of the unit undertaking the enterprise.

Several members of the American Society of Cinematographers were closely identified with the making of "The Last Bomb," including Major Wilfrid Cline, who had previously spent 20 months in China as commanding officer of the 16th Air Force Combat

Camera Unit; Captain Gilbert Warrenton, A. S. C., who was several years in the South Pacific battle area; and Captain Tom Tutwiler, A. S. C., who shot the sequence of P-51 maneuvers for inter-cutting into the subject.

Picture was made entirely in 16mm kodachrome, with the exposed film planed back from the Philippines, Marianas and Iwo Jima to Honolulu with escort AAF officers for processing at the Eastman kodachrome processing laboratory in Hawaii in record time. Subsequently, 35mm color blowups were made by Technicolor, which will eventually make the release prints when the picture is shown generally in the theatres of the world.

The film, which was made in a total of five months, was planned to give the American public an insight into the details of a multi-plane bombing raid on the Jap homeland. Some reports state that the heads of AAF, after checking the most favorable public reaction to the Navy's "Fighting Lady" (which was a documentary in which much of the filmed material was scripted and shot in advance through cooperation with a Hollywood studio), decided that the Air Force could top the sensational audience qualities of "Fighting Lady" with a film on the concentrated bombings of Japan.

Whether or not this report is correct, the final result is sufficiently thrilling

to justify all the effort expended by the AAF and its most proficient motion picture division. There is no doubt but what—even with the war terminating with abrupt suddenness—"The Last Bomb" will be released generally via theatres throughout the world to give everyone an opportunity to view the terrific and overwhelming air forces directed at the Nip homeland.

"The Last Bomb" is a "must see" for every American, and will also provide audiences in other countries with the "know how" of the United States in organizing and waging air war—no matter what the distance or difficulty.

Picture depicts the planning, start, flight, etc., of a 500 B-29 raid on Jap targets—two air plants. The big planes are shown in takeoffs from the Marianas in flights; the pickup of P-51 fighter plane escorts off Iwo Jima, and the run to the Japan islands. Over the target, the bombs drop more numerous than salmon on a spawning run, while the P-51s engage the intercepting Jap fighter planes in sensational air battles.

Direct hits—from 12,000 feet—on the objectives are vividly seen in the orange flashes and glows below. There are several shots from the big bombers to give the onlookers a visual thrill of the devastation and ruin which had previously been visited on Tokyo via air attacks.

While the bombers go about their work, the P-51 fighters battle the Jap fighter planes. Through medium of GSAP (gun sight aiming point) cameras synchronized with gunfire on the fighters, the blasting of the Nip fighter planes is vividly depicted. When hit by shells, the Jap planes shudder as if suspended on a string in the breeze—emit smoke or catch fire—and go into crashes or fall apart.

When the bombers have completed their missions and turn for home, a portion of the fighters stick close by as escorts to prevent delayed raids by the tricky Jap fighter pilots. But other fighters peel off for strafing runs over power lines, trains, factories, airfields, shipping, etc. This sequence of about 10 minutes duration on the screen, surpasses anything else that has been seen in this war; and will be the tops until something better might come along.

Final sequence shows the Iwo Jima base, where crippled B-29s are forced to land due to gas shortage or being crippled in the battle. Several episodes provide maximum thrills when the big planes are forced to belly-land on airstrips or close waters to save the lives of the crew members. Most thrilling is the continual effort extended to save the lives of the pilots and crews, no matter how great the danger to the rescuers.

"The Last Bomb" is a most vivid motion picture of this war—it is certain to be one of the greatest documentaries for preserving the peace for many years to come. Every person—both in the United States and the world—should see it and realize the fallacy of embarking on any future war.



ON THE SET of RKO's "Till the End of Time." Director Edward Dmytryk and Director of Photography Harry Wild, A.S.C., ready to shoot a scene with Jean Porter and Guy Madison.

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The Subjective Camera

By HERB A. LIGHTMAN

The camera is the "eye" of the motion picture. It is not merely a mechanical thing of cogs and wheels and optical glass that records an image on a strip of film. Rather, it is an artistic tool—like a painter's brush, or a sculptor's chisel. In the hands of a craftsman it becomes the instrument through which a dramatic story can be placed on film—so that later on, in darkened theaters all over the world, vast audiences can see the film, react to it, and be entertained.

Psychologically, an audience responds

as strongly to creative camerawork as it does to clever direction or powerful acting. For the camera has "point of view" and the audience will see the story only as the camera sees it. For this reason, the camera's approach to a specific scene must be in key with the concept of that scene as set down in the screenplay, and with the pattern of action worked out by the director.

Usually the camera maintains the role of a detached observer of the story. It is not, in itself, a part of the action—so

it simply stands by and records what goes on, assuming whatever angle will best portray that action. When this is the case, and the camera remains apart from the action itself, we say that the camera is "objective." A vast majority of the action in most photoplays is filmed with this approach.

Occasionally, however, the camera steps out of its role as casual observer and becomes a participant in the story. In so doing it assumes the point of view of one of the characters, and what appears on the screen is what that particular character sees in a certain filmic situation. Thus, the camera actually becomes his "eye," and when this is the case we say that the camera is *subjective*.

This technique, in itself, is not entirely new. Even back when the movies were young a character could scarcely be represented on the screen as being drunk without the audience's being treated to a revolving prism shot of his multiple D.T.'s. But, just as motion picture technique in general has outgrown obvious forms of trickery, the subjective treatment as used in Hollywood today has become a smooth, subtle way of putting the audience into a character's "shoes." It is dynamic without being clumsy.

The psychological effect of this device on the audience is direct and potent. The modern photoplay appeals principally to the emotions. For this reason, it is desirable that an audience participate subconsciously in the action that is taking place on the screen. When a person viewing a film can lose himself in the story and react vicariously to the emotions of the actors—then he is quite apt to leave the theater with the glow of satisfaction of having seen an entertaining film.

The subjective approach, when well executed, tends to bring the audience *into* the picture. It is allowed to see part of the action as it appears to one of the characters, and it will subconsciously experience the same reactions he does.

In several recent Hollywood photoplays there have been some excellent examples of this technique in use. In the film: "The Lodger," directed by John Brahm and superbly photographed by John Seitz, A.S.C., one sequence concerned the murder of a dowdy London charwoman who had stopped by at the pub for an "arf 'n' arf" before going home. By previously established motivation the audience knew that the killer was waiting in her little shack. But when the camera followed her into her room the murderer was not once shown. Instead, the woman started to remove her clothes, whirled about as she heard

(Continued on Page 66)



DETAILS OF UNUSUAL LIGHTING on close shot of William Powell and Lewis Stone for Metro-Goldwyn-Mayer's production, "The Hoodlum Saint." Director Norman Taurog is seated on stool in left foreground, with director of photography Ray June behind Taurog making final check of the scene before shooting.



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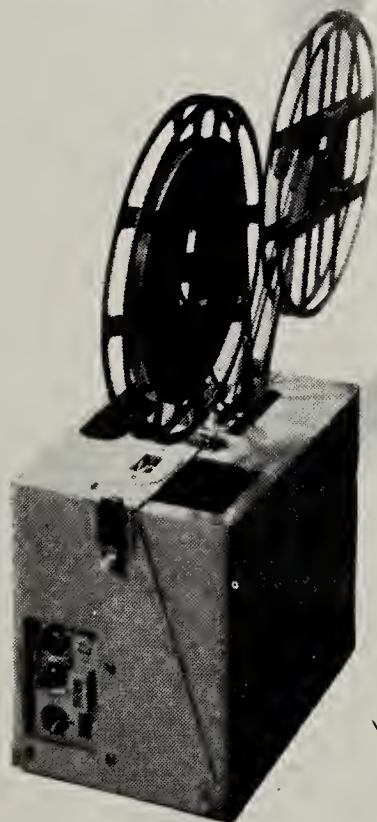
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Report of the SMPE Committee on Color

(Presented at Oct. 17, 1945 Technical Conference of the Society of Motion Picture Engineers in New York, and published in SMPE Journal of Dec. 1945. Reprinted by special permission of the SMPE.)

AS the motion picture industry undertakes an ever-growing percentage of production in color, the matters of increasing present facilities, of opening up new facilities, and, above all, the removal of limitations and restrictions upon methods of operation, become of utmost importance. The engineers and technicians of the industry need to look ahead and formulate the problems and possible solutions thereof, so as to be ready wisely to advise the executives and producers who, it can be confidently predicted, will wake up to the problem rather suddenly.

It is from this point of view that the Color Committee of the Society of Motion Picture Engineers wishes to emphasize the importance to the industry of the new high sensitivity caesium-antimony phototubes which are currently being described.

In order to appreciate the significance of these cells it should first be realized that the great majority of dyes which can be used in the production of color film are transparent to the near infrared region of the spectrum and consequently are unsuitable for use as components of the sound track, if, as is currently the case, the standard photoelectric cell has its maximum response in that region. This remark applies equally to acid dyes such as are used in imbibition processes,

to basic dyes as used in dye-toning processes, and to the insoluble dyes produced by the aid of color formers and color developers.

To be sure, there are a very few dyes or suitable pigments which are absorptive in the near infrared region—ferric-ferrocyanide (the usual iron-tone) is the outstanding example. If, then, ferric-ferrocyanide is used for the cyan component of the picture, a satisfactory track, absorptive in the infrared, can be produced simultaneously with the cyan picture component without the requirement of any special processing steps. Such prints and tracks have been widely used in the 2-color field, as, for example, in Cinecolor prints.

However, the methods which produce this iron-tone image cannot in general be used in the production of yellow and magenta images. Furthermore, the use of this pigment permits no choice whatever in the selection of the cyan component. The iron-toned image for the picture has to be accepted as it is. So as a general conclusion, it can be said that the picture components suitable for the imbibition process, the color-former process, or for any process wherein the three components are treated in a common manner, cannot be used to form a satisfactory track absorptive to infrared rays.

This difficulty has been overcome in the past by producing the sound track in silver or a silver compound, either by a completely separate step, or by means of edge treatment of the film at some stage of the processing. As an example of the former method there is Technicolor's

black silver track, and as an example of the latter there is Kodachrome's silver sulphide track. Now either of these methods resulted in added expense—in the latter case, because of the delicacy of the operation. The boundary of the area of action of the edge-treating fluid, whether applied to track alone or to picture alone, must be confined to a zone only 0.015 in. wide between track and picture, and the action of the fluid must be absolutely uniform across the zone of the application with no variation in the vicinity of sprocket holes; yet agitation as a means of securing uniformity is obviously excluded. A delicate operation of this sort requires, on the one hand, careful control, and on the other hand, the constant threat of reduced yields and increased costs. Quite a number of patents have appeared describing various chemical and mechanical methods of performing this edge treatment.

But now, if the sensitivity of the phototube can be confined to the visible range, then the same components that are used to make up the picture can also be used to produce the track without the necessity of edge treatment. It was with this thought in mind that an earlier Color Committee (in 1937) called attention to the desirability of finding or producing such a tube. At about that same time a photosensitive alloy was discovered by a German investigator, which alloy, when illuminated by an incandescent tungsten lamp, has a peak of response well inside the visible range. Furthermore, when properly prepared, this alloy possesses very remarkable sensitivity.

The development of phototubes containing this alloy has apparently been considerably retarded by the war, though various constructions containing it have appeared in several countries. German-made tubes have been referred to in various articles in *Kinotechnik* and other German magazines, which have been abstracted in the *Kodak Monthly Abstract Bulletin* for November, 1943, and February, May, October and December, 1944. A translation of one of these articles appeared in the *SMPE Journal* for September, 1944. English-made tubes are described in the *Proceedings of the Physical Society (London)* for March, 1943, and also in an article in the *Journal of the British Kinematograph Society* for January, 1943. The U. S. patent on the alloy is now in the hands of the Alien Property Custodian and licenses are available to anyone at a nominal fee.

For use in projectors it seems most desirable to arrive at a phototube which will have about the same output as does the ordinary Ag-O-Cs tube. A tube which meets this requirement and which is mechanically and electrically interchangeable with the present 868 type has been

(Continued on Page 62)



PHOTOGRAPHER BEHIND TWO-BY-FOURS—An intricate camera position to film a train sequence for David O. Selznick's production of "Duel in the Sun."



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THROUGH the EDITOR'S FINDER

Although reports from London state that the British critics were lukewarm to the premiere of Gabriel Pascal's "Caesar and Cleopatra," when the production opened there last month; it does not follow that the picture will not be box office in both Great Britain and the United States. Financed by J. Arthur Rank to the tune of around \$5,000,000 to make it the most expensive released negative to date (although David Selznick's "Duel in the Sun" is said to be in excess of that figure while currently in the editing stages) "Caesar" encountered production problems and delays of unusual character to send costs zooming to astronomical figures.

"Caesar" has to roll up world grosses of terrific amounts to recoup its negative cost. But Rank is too great a business realist not to realize that the picture cannot be forced onto the public unless it carries entertainment values. He will be satisfied with returns that might get back a large portion of the outlay, and figure whatever losses eventuate will be valuable in the long run by providing a showcase picture of British production to catch attention of both theatre men and the public to the effect that England can turn out pictures comparable in general production quality to the best in Hollywood.

This brings to mind the fact that a high cost production does not necessarily guarantee box office merit. During the past two years, there have been at least five or six productions from the Hollywood major studios that were unable to recoup negative costs of \$2,500,000 and upwards. Some were even on Academy Awards nominations, which attested to the fine artistic and production merit of the pictures. But, for some reason or other, they failed to catch attention of the paying public—even in these lush days of box office happiness.

Films for Fire Dept. Reports?

Stopping the other day to survey the damage of what had been a pretty good-sized fire a few hours previously, we were surprised to see the arrival of an officer of the fire department—apparently an investigator sent to the scene to make out a complete report on the specific blaze for the study by the fire prevention bureau. Accompanying him was a fireman equipped with a press graphic camera, and bags of both bulbs and holders. Methodically, the officer inspected all sectors of the exterior, directing the photographer to shoot various phases. The pair then moved into what was left of the building and debris, and the flash bulbs were popping constantly.

The incident impressed one as being important as another important use for

photography. If we had delayed longer, perhaps another fireman would have arrived equipped with a 16 mm. camera and a couple of portable lights to secure a more visual picturization of the damage. How much better to secure films of such an incident for runoff to the heads of the department and the fire prevention bureau, who could study the entire situation carefully and in detail over and over, than to have an individual—no matter how discerning and capable—checking over the scene and making a report from just one individual's observations, as has previously been the case.

As one well-versed individual who has been connected with films for many years recently observed in a gabfest, 16 mm. films can be much more valuable than multi-paged reports or symposiums on situations or events where higher executives or officials have to be given details.

In the specific case of use of films by fire departments, there's an opportunity for the semi-professional and amateur cinematographers in smaller communities to make valuable civic connections by offering to photograph fire ruins for the local departments to study at leisure. And the chores would be right in line with personal pleasures of cinematography.

Peak Color Capacity

It is interesting to note that the color processing laboratories, Technicolor, Cinecolor and Magnacolor, are all at peak production capacity in turning out prints of features and shorts for the film producers. Technicolor, which supplies by far the largest annual footage of color films for the industry, has scheduled present capacity of its laboratory for many months in advance. And the company can do little to increase its capacity to take care of major producers' requests for more color releases. Although property has been purchased and plans drawn for a large addition to the present Technicolor plant, there's the problem of getting the necessary building materials for construction. Further, there are also the important factors of building the highly-precisioned processing equipment necessary, and the training of additional laboratory workers to handle the added volume of output.

Cinecolor, which is a two color process, also is enjoying capacity through contracts for features and shorts of the studios. Limited capacity of its present plant prevents taking on any further commitments at this time. Metro-Goldwyn-Mayer was the first major company to utilize the Cinecolor bi-

pack color for production of a feature, "Star From Heaven," which was recently completed with John Boyle A. S. C., as director of photography. Hal Roach, in resuming production activities to make a series of 12 Streamliner features for United Artists release, contracted with Cinecolor for the latter process on the entire series. Roach also wisely signed Boyle to a contract to take responsibilities of director of photography on the group.

Magnacolor method, also a bi-pack similar to Cinecolor, has also taken a splurge of activity, and now holds contracts for processing for its present limited capacity. But the overall picture demonstrates that the producers realize the box office values of color features, and are impatiently looking forward to the time that virtually all releases will be in color to add to the audience appeal of the product.

Strikes Delay Projectors, Etc.

Industrial strikes in the midwest and east will materially slow movement of 16mm sound-film projectors and both 8 and 16mm cameras, if those strikes continue for any appreciable length of time. This information is disclosed by a distributor who points out that anticipated early and wholesale delivery of 16mm equipment is delayed due to inability of the manufacturers to secure necessary accessories from subcontractors. Let it be plain that there is not—at this time—any indication of strikes or labor troubles in the factories of the projector manufacturers. But the latter depend on smaller plants for certain accessories that go into the final assembly, and that's where the bottleneck will be. In view of this, we recommend that prospective purchasers of projectors and cameras of 8 and 16mm sizes exercise patience with the manufacturers, distributors and dealers.

Film Stockpiles Low

Film trade papers have, during the past several weeks, reported that 35mm negative and positive raw stock is not too plentiful at the present time. If such is the case, there's logical reasons for a certain percentage of decline in volume of manufacture by the raw film companies. It must be remembered that—for at least five years—the latter operated the plants on a 24 hour a day basis. Machines and equipment were kept operating with only makeshift repairs in order to turn out the large

(Continued on Page 70)

**"For perfection in lighting, it must be
carbon arc lamps." Ernest Haller, A.S.C.**



NATIONAL CARBON COMPANY, INC.

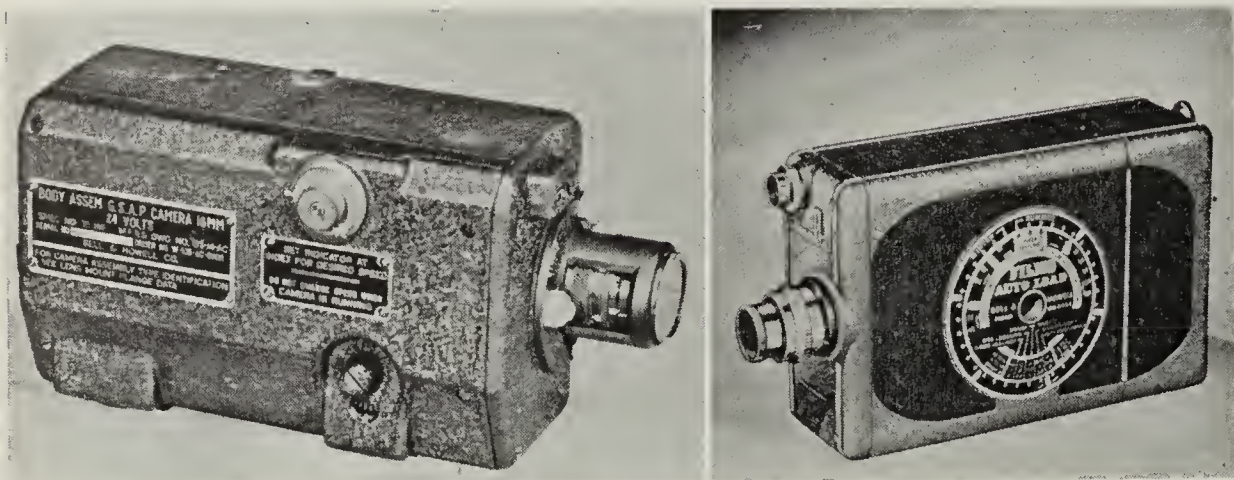
Unit of Union Carbide and Carbon Corporation



General Offices: 30 East 42nd Street, New York 17, N. Y.

Division Sales Offices: Atlanta, Chicago, Dallas, Kansas City, New York, Pittsburgh, San Francisco

Bell & Howell Introducing New 16 mm. Auto Load Camera



The famous "Guzap" camera used by the armed forces to record aerial gunnery effects during combat and training; provides improvements for the new Bell & Howell 16 mm. Auto Load Camera.

Battle-tested and proved under the rigors of war, the new and improved Bell & Howell Filmo Auto Load 16 mm. magazine loading camera will soon be appearing for sale to the public.

Many features of this camera point to its becoming popular in the 16 mm. field. First of all, film threading is effortless. A pre-threaded film magazine is inserted into the rear of the camera, the door is closed and the camera is loaded. Film can be interchanged in mid-reel due to the shutter action on the film magazine. This shutter is opened automatically when the film magazine is inserted, and is closed automatically when the magazine is withdrawn.

A viewfinder of the "positive" type, fully enclosed within the camera for protection, is standard equipment. The "positive" type viewfinder eliminates eye-parallax, one of the most frequent causes of poorly composed pictures. Four years of painstaking research were employed on this finder; result, an image $2\frac{1}{2}$ times brighter than before. One of the most desirable assets is the small size and light weight of this latest Filmo. Measuring $13\frac{1}{4}$ by $3\frac{1}{2}$ by $5\frac{3}{4}$ inches and weighing only 2 pounds $7\frac{1}{2}$ ounces, it is easily carried in a coat pocket for instant use. Despite its small size, professional results are still obtained.

The Auto Load will be available with any of several fine, fast lenses, fully color corrected to produce excellent movies both in color and black-and-white. Telephoto lenses for distant work, and wide-angle lenses for close quarters are instantly interchangeable. Lenses sold by B & H will be specially coated to provide greater clarity of pictures (eliminates "ghost").

A choice of two models can be had, the Filmo Auto Load operating at 8, 16, 24, and 32 frames per second and equipped with a 1" F 2.5 U. F. lens, or the Filmo Auto Load Speedster operating at 16, 24, 32, 48, and 64 frames per second

mounting a 1" F 1.9 F. M. lens. Otherwise, the two cameras are identical.

Most of the aerial combat pictures of this war were taken with Auto Load Cameras modified and specially adapted for that purpose. The Armed Forces' name was Gun-Sight-Aiming-Point Camera, later nicknamed "Guzap." Equipped with a motor, heating device, and other secret modifications, it performed brilliantly.

State Dept. 16 mm. Films

The State Department of the United States has announced organization of a film section which will concentrate on production of 16 mm. films to be distributed both abroad and in this country.

Setup will combine members of the staffs of OWI and Office of Inter-American Affairs, and will be headed by John Begg, veteran official of State Department film division.

Atlas Educational Film Co. Under New Ownership

Atlas Educational Film Co. of Oak Park, Ill., producers of educational and industrial pictures for 32 years, has been acquired by a new corporation of the same name organized by the banking firm of F. S. Yantis & Co. Added capital provided by the new setup will provide for expanded activities of the company.

S. O. S. Cinema Vets Back

Five employees of S. O. S. Cinema Supply Corp. of New York, returned to their posts with that company last month, following release from service in the armed forces. Quintet included: Dominick Capano, Joseph Liguori, But Carlson, Ira Perry and William Allen. Two former workers with the company were killed in action during the war.

Color Slide Contests

Color division of the Photographic Society of America is instituting series of color slide contests to enable members of PSA to evaluate their work in that particular field, and to have an opportunity to win medals and ribbons in the contests. Initial event was held in January, with others to follow in February, March, April, and June of 1946, with entry deadline tenth of each month. PSA members may submit slides with no entry fee, non-members are charged \$1.00 plus postage. Official entry blanks may be obtained from L. F. Plummer, 8320 Carpenter St., Chicago 20, Ill.

Second Canadian International Color Slide Exhibition of Photography will be held at Art Gallery of Toronto March 1 to 14, 1946, with entries closing February 11. Toronto Camera Club is sponsoring the contest, with entry fee listed at \$1.00 by Chairman Sam J. Vogan, Box 25, Toronto 9, Ontario.

Ansco Moves Chicago Offices

Ansco has moved its Chicago branch to recently-purchased three story building located at 247 East Ontario Street, where both the sales offices, new laboratory for film processing, and shipping department will be consolidated under one roof.

New Filmosound Library Releases Announced

MOON LIGHT AND CACTUS (Universal) 6 reels

Returning serviceman has his troubles with women in war jobs—in this case in the running of a cattle ranch. But there is more than one solution of the woman question in the postwar world, though few will be quite as funny. (Andrews Sisters, Leo Carrillo, Elyse Knox, Eddie Quillan). Available from March 8, 1946 for approved non-theatrical audiences.

IN SOCIETY (Universal) 7 reels

A pair of plumbers go high-hat, and on Lou Costello that's particularly funny. The boys go to sea in a bathtub, ride a runaway couch down busy streets, ditto with a fire truck, and finally go fox-hunting riding a steer! (Abbott and Costello, Marion Hutton, Kirby Grant, Anne Gillis). Available from February 18, 1946 for approved non-theatrical audiences.

DANCE REVIVAL—INDIA 10 min.; (black-and-white and color prints)

Pleasant human tale of beautiful girl who becomes teacher of folk dancing in India. Essential dignity and religious import of interpretive dancing is brought out. Should help improve our understanding of Indian people and culture. Photographed in fine color in India by A. Patel, authentic music by Bhatodekar editing and narration by W. F. Kruse.

HOW MUCH PER FOOT?

LOOK at it this way:

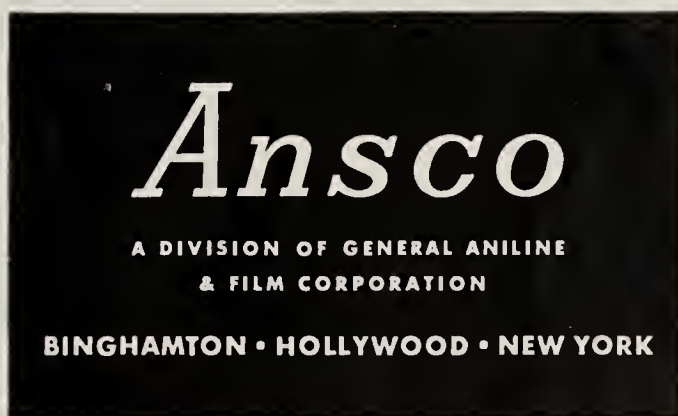
A tremendous expenditure has been made before a single camera rolls. Staggering amounts have been spent on talent, meticulous sets, special skills, and equipment.

Recording all that investment on film makes the finished negatives a pretty valuable property.

That's the way we look at it!

And so every frame of Ansco Supreme is the finest film we know how to make. In grain,

speed, and wide latitude, it has consistently proven true to the trust put in it. You can depend on Supreme.



KEEP YOUR EYE ON ANSCO—FIRST WITH THE FINEST

Eastman Kodak Explains Research Status Of Professional Safety Film

Although progress is being made on research development for professional 35 mm. negative and positive motion picture film, prepared statement by Eastman Kodak Company cautions that many factors have to be considered before the non-inflammable type film can replace the present nitrate stock.

Ed Kuykendall, president of Motion Picture Theatre Owners of America, national exhibitor group, first asked for early introduction of the safety film stock for theatrical use in a bulletin to members several years ago. This was picked up by trade publications, some of which indicated that a changeover to non-inflammable print stock could be made within a short time.

However, as the Eastman information discloses, much has to be accomplished and a long time will undoubtedly elapse, before the industry secures the full benefits of Eastman's development and perfection of the safety film for production and theatre use.

The Eastman Kodak release states:

"In view of the numerous and sometimes inaccurate articles which have recently appeared on the subject of safety motion picture film, the Eastman Kodak Company has authorized the following statement covering their own position.

"Following the years of research and development, the quality of motion picture safety film, particularly with respect to its ability to stand up under theatre projection, has constantly improved. The Eastman 35 mm. safety film used in large quantities by all governmental agencies during the war performed satisfactorily under the conditions under which it was used. This included regular theatre projection but, generally speaking, the length of run to which these prints were subjected was considerably shorter than that for normal nitrate release prints.

"Numerous tests of safety film, both standard and experimental, have been made by Eastman in recent years in their own laboratories and under trade conditions. Such tests will continue. So far, however, both laboratory and trade tests have shown that the best safety film is not equal in wearing quality to nitrate. Any attempt to generally replace nitrate film with the present safety would inevitably result in substantially increased print damage and much higher print costs to the industry.

"No experience to date has indicated that safety base can be produced as cheaply as nitrate. When and if a completely satisfactory safety base can be made and sold in quantities comparable to the present output of nitrate, the price might be lower than the present 1.25 cent price of current safety positive, but there is no present prospect that it could reach the low price level of nitrate film.

"The outlook for the eventual transition of the industry to safety film continues to be hopeful. Improvements, however, are still essential and certainly no specific date for a possible shift to safety base can be set at this time."

Bell & Howell Equipment To Be Manufactured In England

Tom Law of London, representing the J. Arthur Rank British group of companies, and Joe McNabb, president of Bell & Howell Company, are concluding agreements started with the visit of Arthur Rank to Chicago last June.

By the terms of the agreements, Bell & Howell Company of Chicago and British Acoustics, the engineering and manufacturing company of the Arthur Rank group, are entering into a long term period for an interchange of research, manufacture, and distribution of equipment and films.

British Acoustics will set up the complete manufacture in England of all Bell & Howell standard and substandard equipment including 16mm. sound and silent projectors, 16mm. and 8mm. cine cameras, and 8mm. projectors, as well as a wide range of accessories. The plants in England will be operated on

Bell & Howell engineering and manufacturing methods. Distribution of products made in England will cover the British empire and certain countries in Europe and Africa. Duplicates of Bell & Howell tools and drawings, as well as consulting engineer,, will be winging towards the English coast shortly, it is expected.

The agreements also provide for an interchange of 16mm film distribution between the Rank 16mm libraries and Bell & Howell's Filmosound libraries. When in full operation, the deal will considerably strengthen the British field of equipment in the standard professional 35mm line as well as in the amateur and substandard lines and give England and the British colonies the counterpart of the production of the Bell & Howell equipment, manufactured in Chicago.

Blind Aid Invented by Joseph Walker, A.S.C.

Still another demonstration of the technical and engineering inventive abilities of members of the American Society of Cinematographers is seen in the widespread national attention and publicity accorded an electronic radar "seeing eye" developed by Joseph Walker, A.S.C.

Walker, in addition to being an outstanding director of photography in motion picture production, finds time to experiment and research on radio and electronic devices. His home workshop and experimental laboratory contains modern and exacting equipment generally only contained in the research laboratories of the electrical companies.

The "seeing eye" device is currently contained in a box the size of a portable radio, although Walker expects to get the instruments eventually into a case the size of a folding camera. Inventor Walker is no newcomer to radio and wireless, having assisted Dr. Lee De Forest in 1910 in tests of the world's first wireless telephone. He has turned over the device to the Braille Institute of America for further testing and de-

velopment and along go the patents for which he has applied.

Apparatus in operation is best described as an auditory range finder for blind persons. Basically, it embodies photographic features in that two motion picture camera lenses set 10 inches apart on front side of the box activate a buzzer to earphones of the carrier through two photoelectric cells in the box. It is explained that the closer the carrier gets to an object in his path, the buzzing becomes more insistent. Special color filters, also adapted from cinematography, allow identification of colors through a wheel that turns the particular filters in front of the lenses.

Walker points out that the device cannot guide a blind person through traffic or crowds, but it will undoubtedly have limited uses for the sightless which will enable the latter to get around easier, especially at home or in familiar neighborhoods where landmarks are familiar through long association. Mainly, it will allow a blind person to take a turn around the block without recourse to the white stick method for tapping to ascertain that he is still in safe channels.

Tiedeman Joins Ansco

Dr. John A. Tiedeman, until recently attached to the U. S. Naval Academy as a Commander, U.S.N.R. has been appointed director of Ansco's Education Department. For the past five years, Dr. Tiedeman was assistant head of the physics section at Annapolis. Previously, as a member of the faculty of the Woman's College of the University of North Carolina, he pioneered in offering a course in photography.

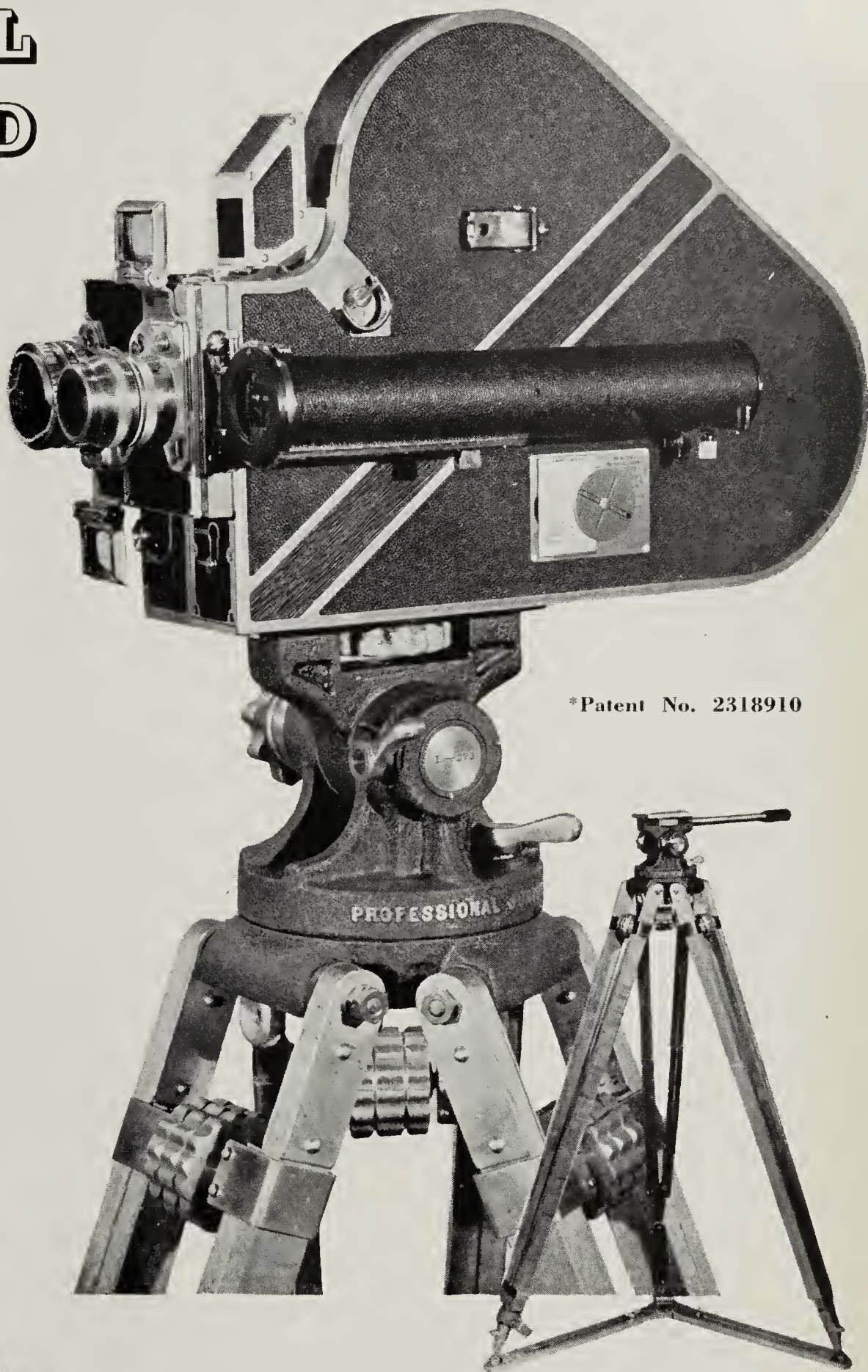
"PROFESSIONAL JUNIOR" * TRIPOD

*with Removable Head
Now Available!*

*Acclaimed the finest for
every picture taking use.*

The friction type head which is unconditionally guaranteed for 5 years, gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor or Baby "Professional Junior" Tripod base. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

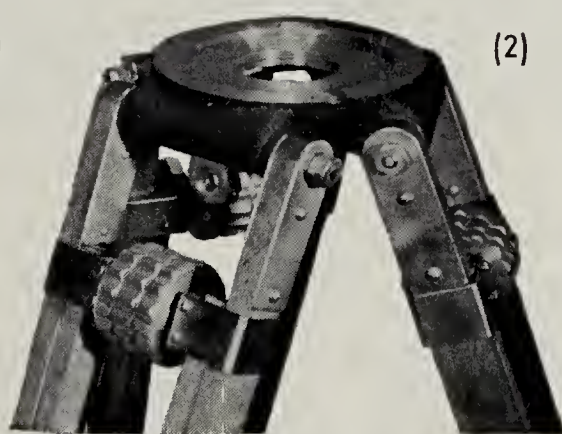
The standard size tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest.



*Patent No. 2318910

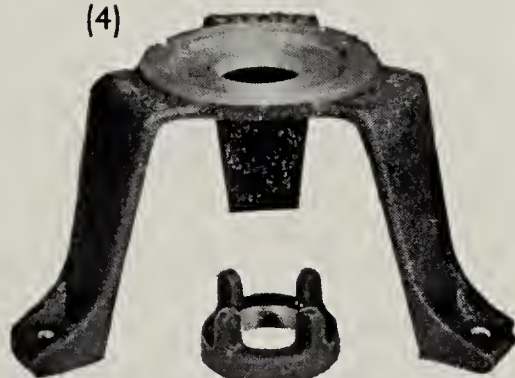


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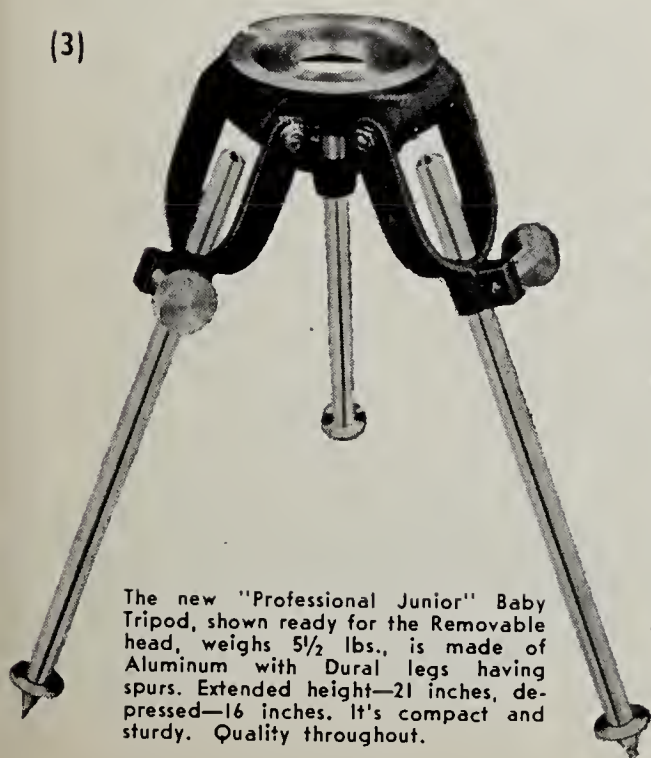


(2)

(4)



(3)



Adaptability: here are illustrated (1) the friction type removable "Professional Junior" tripod head that may be affixed to (2) the Standard Tripod Legs Base and (3) the new all-metal "Baby" tripod and (4) the "Hi-Hat" by simply fastening the finger-grip head fastening nut that is shown under it. Note the positive-locking, fluted, height-adjustment knobs and tie-down rings of the Standard Tripod Base which is standing on a Triangle.

Now Available to Camera Owners and Dealers

The new "Professional Junior" Baby Tripod, shown ready for the Removable head, weighs 5½ lbs., is made of Aluminum with Dural legs having spurs. Extended height—21 inches, depressed—16 inches. It's compact and sturdy. Quality throughout.

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading News-reel companies and 16mm. and 35mm. motion picture producers.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

AMONG THE MOVIE CLUBS

Los Angeles Eight

President W. D. Garlock won the 1945 contest of Los Angeles 8mm. Club with his entry, "The Grass Is Green." Fred Evans' "Billy's Big Adventure" was second, and Sylvia Fairley's "She Lives Alone and Likes It" caught the nod for third. Mildred Caldwell was fourth with "The Farmer's Daughter"; John Northrup fifth with "How to Ski," and John E. Walter sixth with "El Camino Real." These six pictures were shown at eleventh annual banquet and installation of officers, held at Scully's with 125 in attendance.

Other prize winning films in the contest were shown at the January 8th meeting at the Bell & Howell Auditorium. These included—in final positions from seventh to nineteenth—"Rancho Del Sur," A. Carmona; "Travelog No. 2," B. M. Bevans; "Through the Pines," H. E. McEvers; "Underwater Pictures," John R. Boaz; "Cine Sketches," William J. Millar; "Junior Marines," Ward Dudley; "Ocean Scenes," Irwin Dietze; "Isles of the Pacific," L. B. Reed; "Grand Canyon," Max Rapp; "Black Magic," Adolph Apel; "Autumn Leaves," John R. Boaz; "High Sierra Vacation," John R. Boaz; and "Vacation," Ed. F. Stout. Garlock was awarded the Babb Achievement Trophy, and Bevans won the Horton Vacation Trophy.

Los Angeles Cinema Club

Guy Nelli captured first prize in annual film contest of the Los Angeles Cinema Club with his "Quaint Old Mexico." Second award went to Carl H. Thomsen for his "Caribou Road." Announcement of winners in the club's annual contest was made at the annual banquet held at Los Angeles Breakfast Club on January 7, 1946.

Other prize winners were: Dr. Roy E. Gerstenkorn, third, for "Tropical Ecstasy"; Mrs. Mildred Zimmerman, fourth, for "Lilac Time in Utah"; Jack Shandler, fifth, for "Autumn in Yosemite"; C. S. Morris, sixth, for "Honolulu Flight," and Jim Davis, seventh, for "Tuna Fishing."

Metropolitan Club

Judging of the novice film contest of Metropolitan Motion Picture Club, New York, has been postponed for a few months due to lack of sufficient entries at this time. Prospective entrants promise to submit pictures as soon as shooting and editing of newly-available film is completed.

January meeting was held at the Pennsylvania Hotel on January 17, 1946, and presented film program highlighted by Leo Heffernan's 16mm Kodachrome subject, "South of 36° North." February meeting will be exclusively devoted to 8mm filming.

Subscriptions Offered For Contest Prizes

With the post-war revival of contests by amateur cine clubs, chairmen of such events in the various organizations are reminded that AMERICAN CINEMATOGRAPHER will donate a year's subscription as a prize. This policy was adopted several years ago to encourage amateur contests in the clubs, and to further activities in the 8 and 16 mm. fields.

Contest chairman can automatically set the subscription as a prize on the list, and advise AMERICAN CINEMATOGRAPHER of the name and address of the winner of the award.

Metropolitan Sets Christmas Film Contest

A special Christmas film contest for members is announced by Metropolitan Motion Picture Club of New York, with films to be submitted before December 1, 1946. Winner of the \$25 award will be announced at Metropolitan's next Christmas party to be held around the middle of December.

Subject must be based on the club's Christmas celebration party, or on the story, "Story of the Christmas Tree." Announcement of the contest so far in advance gives members plenty of time and opportunity to plan and shoot films for submission.

Cinema Club of San Francisco

Initial meeting of Cinema Club of San Francisco for 1946 was held at the Women's City Club on evening of January 15th, at which time the new officers outlined plans for increased member participation in programs during the year.

Film program of the evening included: "The Water Ouzel," (8mm) by Rudy Arfsten; "Springtome in Lake County," (16mm) by Leon Gagne; and "The Philippines Pearl of the Pacific," (16mm) by William Ward.

Las Casa Club

Regular monthly meeting of the La Casa Movie Club of Alhambra, California, was held at the Y. M. C. A. on January 21, 1946. Evening's film program included: "In and Around Yellowstone Park," by A. A. Maryott; W. D. Gaylock's prize winning picture, "The Grass Is Green"; "Isles of the Pacific," by L. B. Reed; and "Summer Wanderings in the High Sierras," by Graham McConomy.

Utah Cine Arts Club

Fourth Birthday and Awards banquet of Utah Cine Arts Club of Salt Lake City was held in the Rose Room of Newhouse Hotel on evening of January 16, 1946, with 200 members and guests attending.

Despite film shortages and other handicaps in filming during the past year, five members won national movie award contests; all of which were shot on kodachrome.

The winning pictures were screened at the banquet for the assemblage, and included: "America, the Beautiful" (8mm) by LeRoy Hansen; "Come Autumn," (8mm) by Al Londema; "Romance of a Sawmill," (8mm) by Miss Virginia Smith; "Worth Scouting For," (8mm) by Al Morton; and "Ski Time in the Rockies," (16mm) by Norman Shultz.

Brooklyn Amateur Cine Club

Arrangements have been completed for permanent meeting headquarters of Brooklyn Amateur Cine Club at the Hotel Bossert, where sessions have been held periodically for the past several years. At meeting on Jan. 2, plans were discussed for a future "Gala Night" of the club, and film program included a 400 foot kodachrome reel presented by Mr. Manfrin, and a circus picture by Arthur Gross.

Second January meeting on the 23rd presented program of films including "Dear Boys" by Charley Debevoise; and Walter Bergmann's prize-winner, "Squeaky."

Annual contest closed at the meeting of the 23rd, with entries of members split up between the "A" and "B" classes.

Southern Cinema Club

Seventh annual contest and banquet of the Southern Cinema Club of Southgate, Calif., was held at the Van Matre Inn at Huntington Park on January 26, 1946.

Westwood Movie Club

Westwood Movie Club of San Francisco held its annual dinner at the Del Mar Restaurant on evening of January 26, 1946. In addition to providing opportunity for presentation of contest awards to winner Walter C. Johnson, and honorable mentions to Harry Berman, Don Campbell and Leo M. Kerkhof, officers for the coming year were installed with suitable ceremony. These include: President, Fred Harvey; vice president, Walter Johnson; treasurer, Larry Duggan, and secretary, Leo M. Kerkhof. Film program wound up the evening.



There's ACTION for Your Movie Camera

NOW THAT CINÉ-KODAK FILM IS BACK

**Brilliant black-and-white... full-color
Kodachrome . . . 8mm. and 16mm. . . .
in rolls and in magazines.**

• It's been years since there's been enough Ciné-Kodak Film to go around. But now it's plentiful again—any type you want . . . and, perhaps, *all* you want.

Make up for the movie opportunities you've missed . . . the picture plans you've postponed,

by loading up with rolls or magazines of these fine full-color or panchromatic Ciné-Kodak Films—today, as ever, *uniformly* dependable.

Ciné-Kodaks are on the way. Keep in touch with your Kodak dealer—Ciné-Kodaks are coming! Those all-time favorites, Ciné-Kodak Magazine 8 and Magazine 16—and that peer of all 16mm. performers, Ciné-Kodak Special. Only a few—at first . . . then more and more in the weeks and months to come.

EASTMAN KODAK COMPANY • Rochester 4, N. Y.



Kodak

SIMPLIFIED MOVIE PROCESSING IN YOUR OWN DARKROOM

by JAMES R. OSWALD

An understanding of the principles of motion picture developing is something to be acquired with advantage by every serious minded movie maker. Such a knowledge is beneficial not only from the standpoint of knowing, in a small way, what goes on behind the scenes of the professional processing laboratory, but also in the sense that picture taking, itself, may improve through such experience. Just as the skilled craftsman in any trade is a better worker when he is well acquainted with the

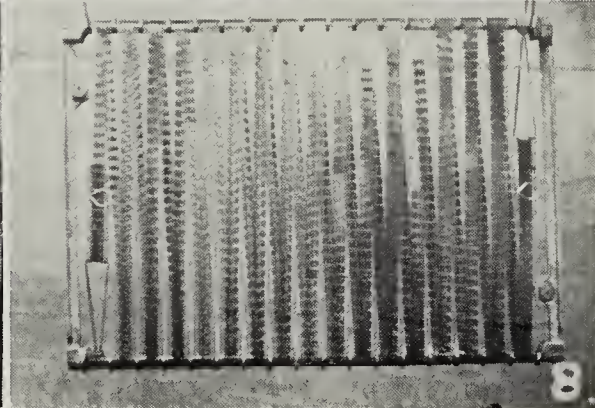
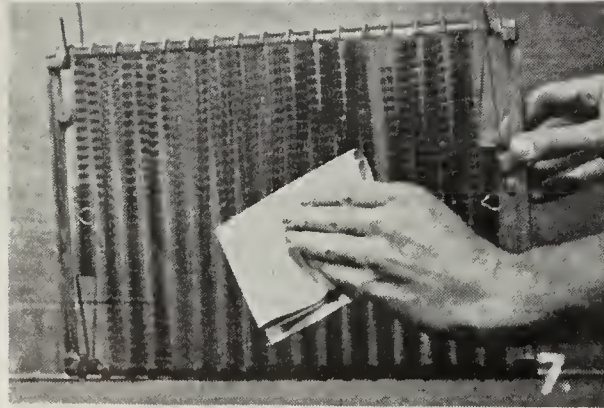
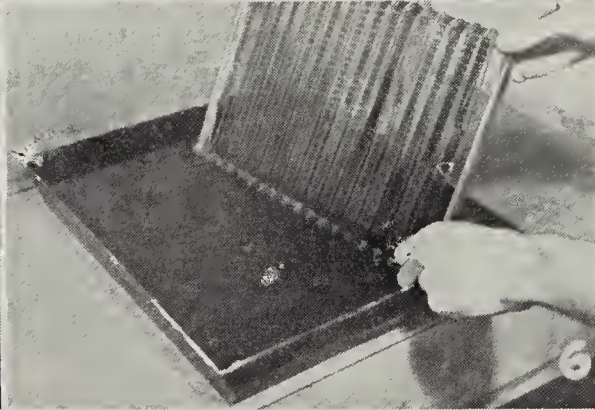
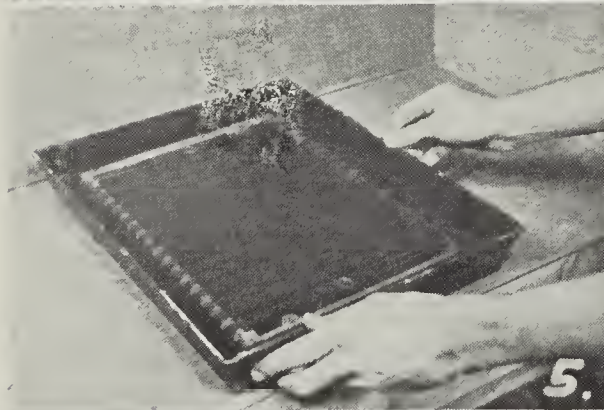
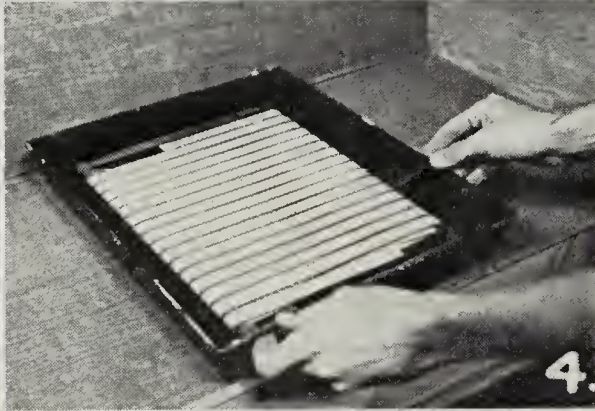
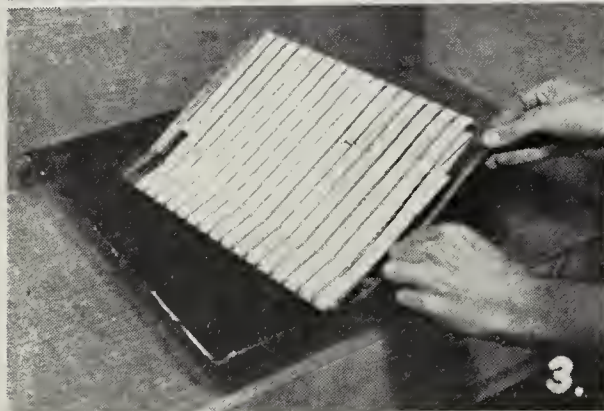
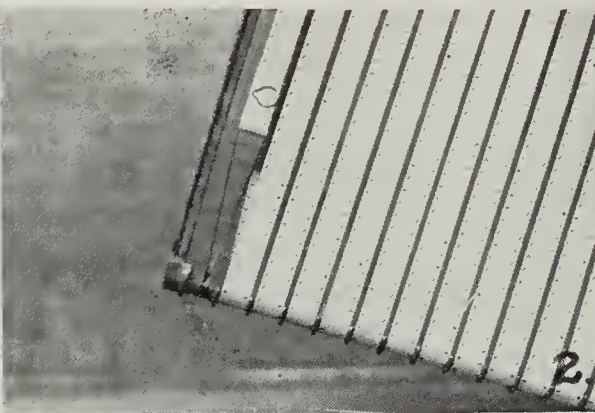
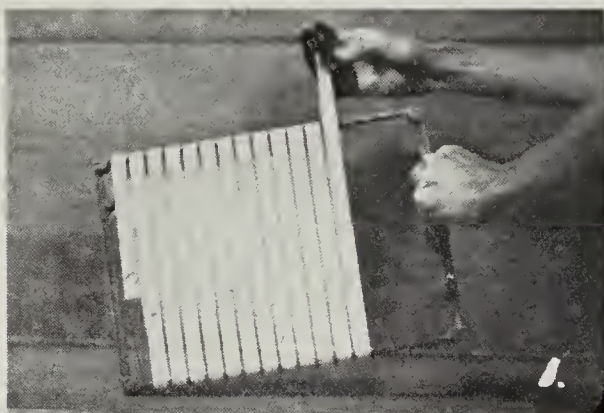
tools with which he works, so also should the movie maker, worthy of the name, be thoroughly familiar with the "tools" with which he works.

One of the best ways to learn some of the characteristics of motion picture film, and film certainly an important tool of the cinematographer, is through practical experience in one's own darkroom. With the aid of simple equipment, the developing process is carried on with almost the same ease as that enjoyed in handling still films, and with

surprising results. For the person who likes to tinker with tools, such apparatus as is necessary may be constructed right at home, or, if preferred, may be purchased already assembled.

While it is possible to home-process practically any type of movie film, after one has advanced beyond the more elementary requirements, it is rather foolish, and certainly inadvisable to handle film at home that will be processed by the maker free of charge. There are,

(Continued on Page 69)



1. The film is unspooled in the darkroom onto the developing rack. The rack should be so constructed as to fit a conventional size developing tray, such as 11x14 inch, requiring a minimum of solution. A rack similar to that illustrated accommodates approximately 25 feet of film at a time, uses about a gallon of solution.

2. Closeup showing method of attaching film to rack by means of rubber band and paper clip. Rubber band allows for any expansion or contraction of the film during the different stages of the process. Note guides which prevent film loops from overlapping. No part of the picture surface itself actually touches the rack, since edges of film rest on surface that is slightly raised from that underneath the picture area.

3. Film is immersed into the developing agent. Ordinary D-72, D-76 or its equivalent, serves as the developer. For extreme contrast, such as in title work, D-11 is recommended.

4. As in the case of still films, the solution is constantly agitated, by rocking. Occasionally, the rack is turned over in the tray, during the process.

5. After a time, the film begins to darken, like this. Development is carried on to the length of time specified by the manufacturer of the particular developer being used.

6. With development complete, the rack is raised from the tray, draining off the surplus solution. Film is then placed into another tray containing water or a short-stop, and from there into a third tray of fixing a solution or acid hypo and hardener. If film is to be reversed, instead of placing in the fixing bath, it is first put through a bleach, removing the negative image, and then "flushed" to a light source, which exposes the remaining silver salts, to form the positive image, which is obtained by repeating the developing step.

7. In either process, the final step is to thoroughly wash the film in running water to remove all traces of hypo, after which the rack is hung up on wire hooks, to allow the film to dry evenly. Sponging off excess water helps to prevent spots.

8. The operation complete, the film is left to dry in a room free from dust. When thoroughly dry, it is spooled onto a reel, ready for projection.

16 mm. Talking Pictures in the Home of Today!

With the new Ampro Sound-on-film Projector

It's here now—the modern motion picture theatre in the comfortable privacy of your own living room—with complete programs of sound films combining entertainment, music, news, education and travel. Through the compact, low-cost, easy-to-operate Ampro 16 mm. projector you can make the large and rapidly expanding libraries of 16 mm. sound films available to your family and friends. You can hear and see what you want when you want it. Ampro projectors add a new dimension of pleasure to your home life. Ask your dealer to demonstrate an Ampro to you *today*!

Illustrated here is the new Amprosound Premier 10—offering superb tone quality, brilliant illumination, centralized controls—and many other exclusive war-tested features. Write for complete descriptive circular giving prices and full details.

The Army-Navy "E" has been awarded to Ampro for excellence in the production of 16 mm. motion picture projectors.



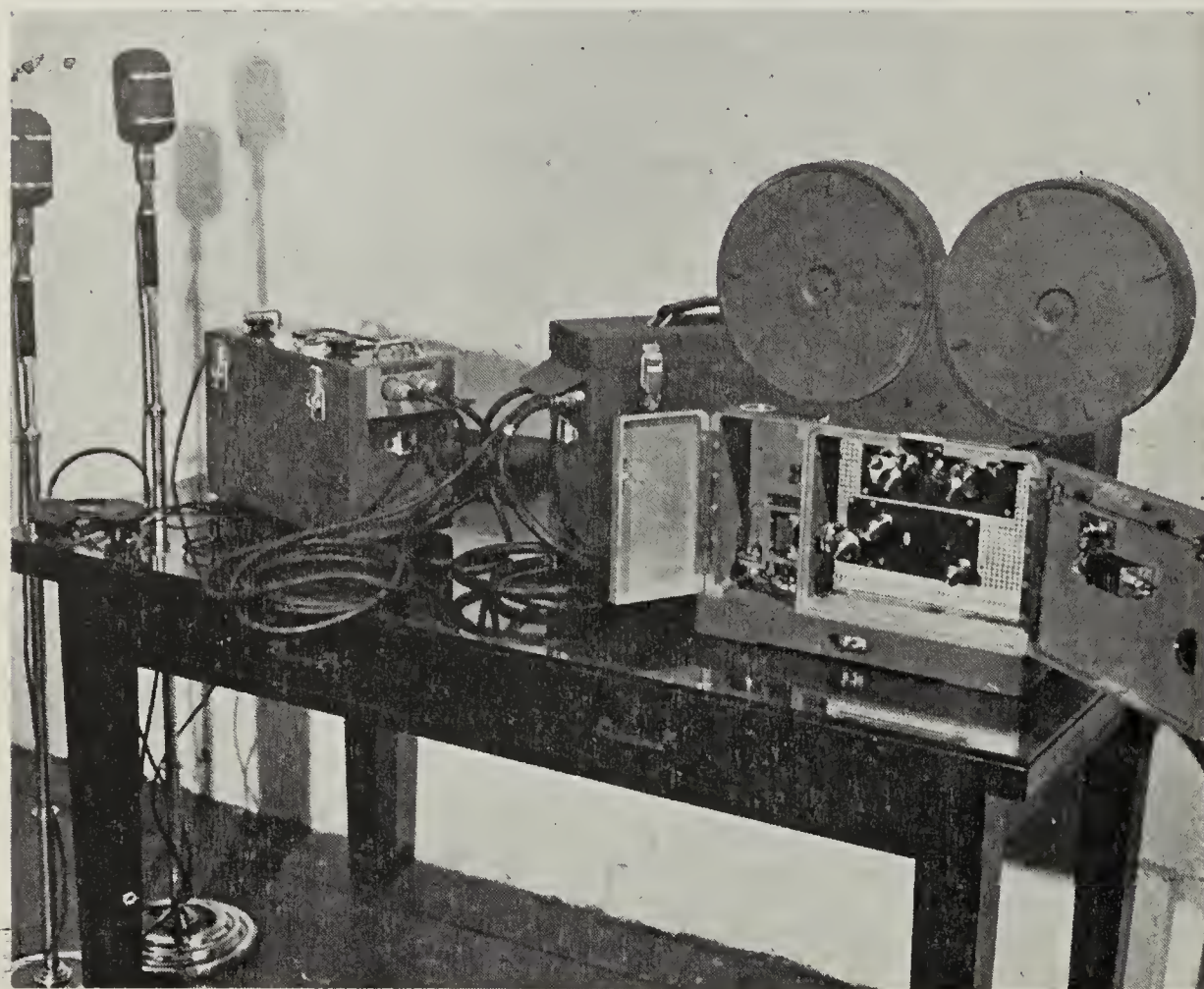
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AMPRO

8 mm. silent... 16 mm. silent... 16 mm.
sound-on-film... 16 mm. arc
projectors... accessories

New Western Electric Sound Recorder For 16mm. and 35mm.



New Western Electric sound recording system, which will enable producers to record standard original or release type of sound tracks on either 35 mm. or 16 mm. film. Shown above on the table are (left to right) the new portable Amplifier-Noise Reduction Unit, Power Supply Unit, and the Recorder.

A new recording system, which will enable producers to record any of the standard original or release type of sound tracks on either 35mm. or 16mm. film has been announced by the Electrical Research Products Division of the Western Electric Company, to be available within the next few months.

According to technical papers recently presented before the 58th Semi-Annual Technical Conference of the Society of Motion Picture Engineers at the Hotel Pennsylvania, the new recording device, smaller in size and weight, represents a marked departure in design from equipment in use today. Features of the new design are simplicity of mechanical parts and freedom from critical adjustments, more rapid threading of film, adaptability to either variable area or density recording, and the reduction of flutter to extraordinarily low values. Its unit assembly type of construction and the introduction of various innovations permit flexibility in meeting a variety of recording requirements including changing from 35mm. to 16mm. in a matter of minutes by the use only of a screw driver.

The new portable Amplifier-Noise Reduction Unit with a Power Supply Unit is suitable for use with newsreel cameras for single film recording or with the new recorder where an inexpensive double film system is required. Two microphone input positions are provided, and noise reduction and volume limiting are included.

"Surfboard Rhythm" Acquired by MGM for Pete Smith Sportshort

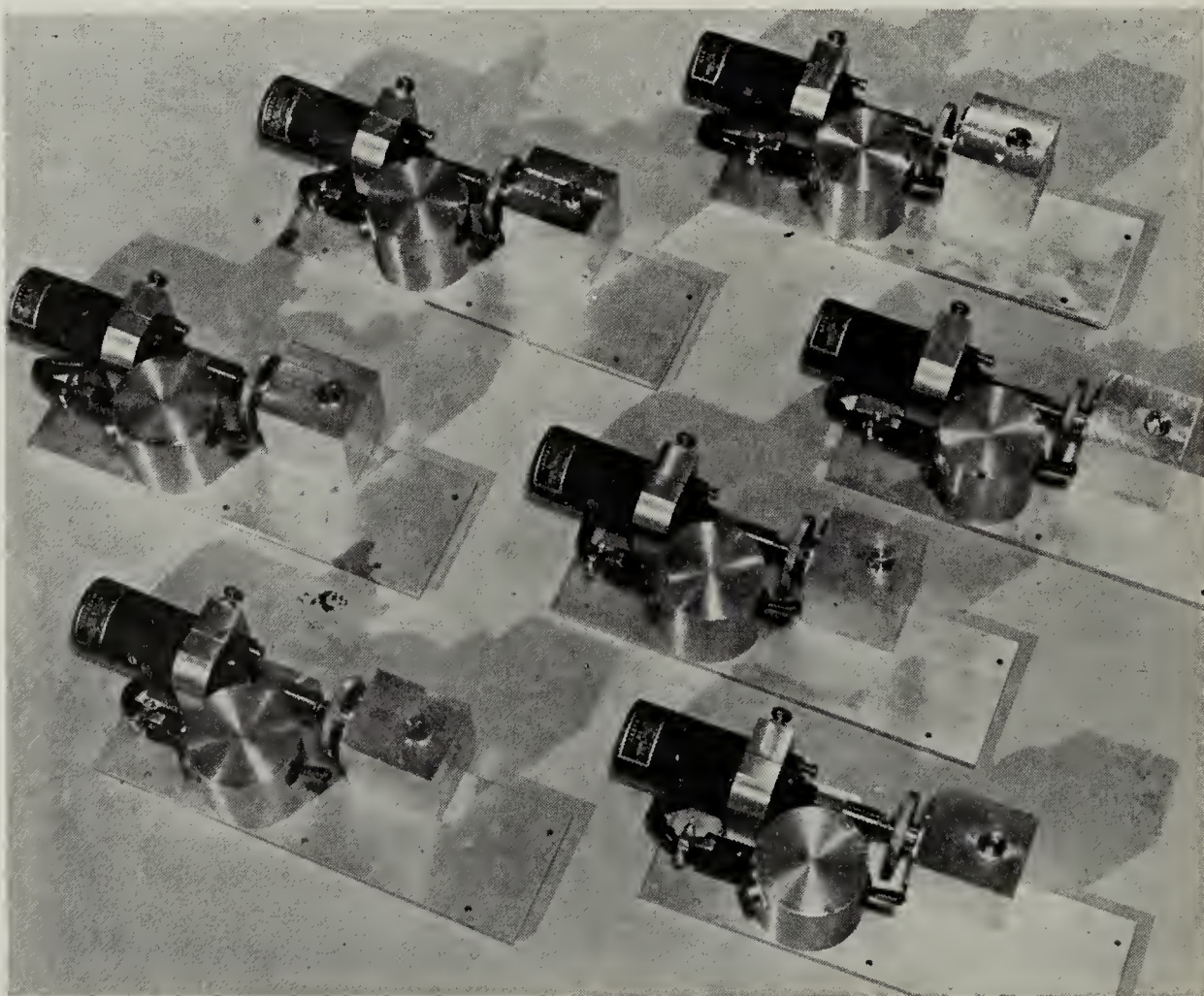
"Surfboard Rhythm," produced by Telefilm Studios in 16 mm. under direction of Charles Trego, has been purchased by Pete Smith and will be released in his 35 mm. sports short series at Metro-Goldwyn-Mayer. The film is replete with unusual camera angles including scenes shot from waterproofed camera mounted on a surfboard, which could not have been taken with more ponderous 35 mm. equipment, Telefilm maintains. Surfboard champions were featured in the short.

Ampro Distributor for Canada

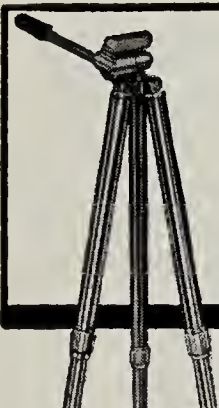
Telephoto Industries Limited of Toronto has been formed to handle distribution and servicing of Ampro 16 mm. motion picture equipment and accessories in Canada and Newfoundland.

Paul Nathanson, head of the Canadian Odeon theatre circuit and operator of film exchanges in the Dominion, organized the new company. C. Ray Harnett, Canadian visual education expert, has been appointed general manager of Telephoto Industries.

Acquisition of the Ampro line of 16 mm. sound projectors and equipment indicates future plans of Nathanson to expand his theatre operations throughout Canada with establishment of theatres in smaller communities where regulation 35 mm. theatres have not been operating.



THESE CAMERAS MAKE 16 MM. HISTORY—Here are cameras, specially adapted with motor drive and special lenses and mounts, designed and built by technicians of Telefilm Studios of Hollywood for purpose of covering horse races at Hollywood Park and Santa Anita tracks in California. Head-on films are shot of races from start to finish from six towers around the course.



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BY AMERICAN BOLEX COMPANY*

PRECISION ENGINEERED!

A SMOOTH WORKING FRICTION HEAD that will not loosen up or wear out

WEIGHS ONLY FIVE POUNDS — absolutely rock steady

REVOLUTIONARY IN TRIPOD DESIGN — quarter turn of grip locks firmly or unlocks easily pan-tilt head

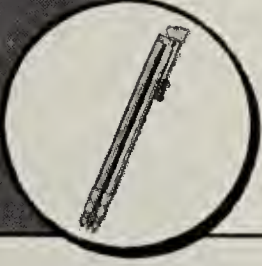
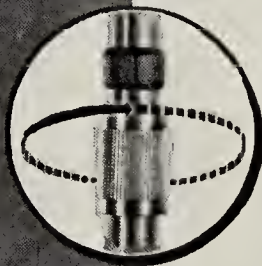
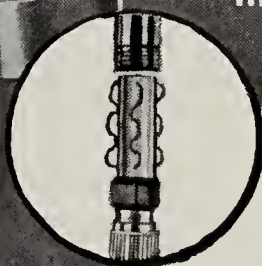
STRENGTH ENOUGH TO SUPPORT 200 LBS. telescopic aluminum legs designed so there is no "play" at joints whatsoever

SPRINGS AND SPLIT BUSHING in sliding leg members prevents wobble and assures smooth, precise operation

LARGE, MILLED LOCKING LEG GRIPS permit certain and instant lock with grip that cannot be pulled apart

REVERSIBLE STEEL POINT OR RUBBER FEET holds stand firmly on any surface

FOLDS INTO SMALL, EASILY PORTABLE PACKAGE so light this tripod will be with you when you want it . . . you will carry the AMBOL because of its lightness and because you will be proud of it



The AMBOL TRU-PAN TRIPOD is new in design and precise in operation. It is fully machined and precision built. Only machining can give the precision required for smooth operation in a pan-tilt head. There is not one die-cast part in the AMBOL TRU-PAN. Its smooth operation is amazing. One inspection at your Dealer's will make you the owner of one of these, the finest low or medium priced tripods ever made.

Operates efficiently with all cameras, "still" or movie, weighing from a few ounces to many pounds. No camera too light and none too heavy for the AMBOL TRU-PAN. Special attachment for press cameras. Fully guaranteed. Price, \$43.10 including excise tax. Ask your Dealer to demonstrate. If not yet in his stock when you call, please write us for literature and give us the Dealer's name.

*

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Report of SMPE Color Committee

(Continued from Page 48)

developed by RCA and will be manufactured in quantities as soon as there is a commercial demand. This tube will be known as the 1P37. It is to be expected that satisfactory tubes will be made available by other manufacturers.

Tubes of this new type appear to have some advantages over the Ag-O-Cs tube. For example, the sensitivity at shorter wavelengths makes possible a marked increase in resolution of the slit image. This, and related factors, are described in detail in the several papers which are scheduled for presentation later in the Conference. From the comments of those who have experimented with the new tubes, it appears that this new unit is a remarkably good tool and one which promises to have a widespread use. In fact, it is very much in order for this industry to consider the proposition to replace the present infrared sensitive phototubes in projectors with tubes of this new type. The merits of the new unit can be summed up by saying that had it been developed prior to the Ag-O-Cs tube there would not now be any thought of replacing the former with the latter; and this statement can be made without considering the new potentialities of the new tube for color sound tracks.

The chief merit of the Ag-O-Cs tube,

then, is reduced to the fact that it is already in widespread use. But, for sound reproduction, the threat of obsolescence hangs over it.

The results made possible by the use of tubes of this new type with sound tracks on color film will be the subject of additional papers at this and subsequent Conferences (of the SMPE). The way in which tracks of ferric-ferrocyanide and of silver sulphide react with the new tube also needs study. In this connection it should be noted that ferric-ferrocyanide is not nearly so transparent in the range of sensitivity of the new tubes as are the great majority of dyes in the near infrared region. And it appears from preliminary tests that the iron-tone track can be adapted to the new tube.

The Color Committee wishes to stress the fact that in tubes of this new type we have a new and useful tool which opens up possibilities of simplification of processing of sound tracks on color film.

Considering the matter of prospective future replacement, the Committee wishes to stress the matter of interchangeability and standardization, particularly in the 35 mm. field. There are apparently two different characteristic constructions, and it is not clear from published data whether or not there is a variation in spectral sensitivity between the two constructions.

If, as, and when new tubes of this description are adopted by the industry, such a change must be world-wide and accomplished with the minimum of confusion. The Committee recommends that the Society communicate with the British Kinematograph Society and other similar organizations in all countries, to the end that a norm of performance for such tubes be set up. This norm should apply to both the optical and electrical characteristics.

The Committee believes that in the first instance this prospective change-over need be considered only for 35 mm. film. The change-over in the 16 mm. field is a rather different matter, and with regard to that the Committee has no recommendations at the present time.

The SMPE Color Committee making the above informative report comprised: J. A. Ball, chairman; M. R. Boyer, G. A. Chambers, L. E. Clark, R. O. Drew, R. M. Evans, J. L. Forrest, J. G. Frayne, L. T. Goldsmith, A. M. Gundelfinger, A. C. Hardy, W. C. Miller, L. L. Ryder and J. G. White.

Ansco Factory Expanding

Ansco has embarked on a construction project to greatly increase factory capacity for the manufacture of raw film and other photographic products. Building program under way provides for outlay of more than \$10,000,000, with the present factory at Binghamton, New York.

16mm. Accessories by Micro-Engineering

Rapid expansion of 16mm film activities in professional fields to generate need for precision instruments and accessories similar to apparatus in use in the regulation studio production, has dictated formation of Micro-Engineering Corp. Latter plans design and manufacture of various precision-made accessories and equipment for 16mm professional use, especially in laboratory processing and editing.

Len H. Roos, A. S. C., veteran cinematographer, film war correspondent, and producer, is president of the new company, which has available a large plant equipped with nearly \$1,000,000 worth of precision machine tools and machinery for the manufacture of the 16mm accessories. Ben Levin, Hollywood attorney recently returned from the AAF, is vice president, while B. Weldon Hancock will take charge of sales and distribution.

Initial product developed in the research division of Micro-Engineering to be placed on the market is a 16mm splicing machine said to be original in both concept and construction. Its precision tooling is as exacting as splicers turned out for the studios.

Features include base and movable platen arms of dural, finished in black crackle lacquer with polished trim. Platens are stainless steel, hardened, ground and polished to exacting smoothness. Oilite bearings throughout eliminate necessity of oiling.

One registration pin in the left platen, together with cutout guides at the ends of the extra long platens, insures correct registration regardless of any film shrinkage. Scraper is an integral part of the machine, and cannot be misplaced. Its preset blade is of carboloy, which gives it virtually a diamond-hardness and years of service without necessity of replacement. Semi-automatic in operation, the scraper cuts to a depth of .0015 inch and width of .070 inch in one movement, with a spring action returning the scraper to original position.

Lowering of the right platen automatically cuts both ends of the film exactly, while pressure springs hold the platens together for the seal, which is accomplished with both speed and accuracy. Heating unit in base maintains constant temperature of 110° on the platens to enable sealing and drying of the splice in a matter of seconds. Automatic control prevents overheating.

In marketing the new professional splicer, Mr. Roos discloses that development is currently in progress on a synchronizing machine, a film polisher, a sound reader and viewer, and an editing viewer, for the 16mm producers and studios. Initial models of several are now in construction.

PRECISION LENSES For Immediate Delivery



Bausch & Lomb Baltar F 2.3 50mm.

Bausch & Lomb Baltar F 2.3 75mm.

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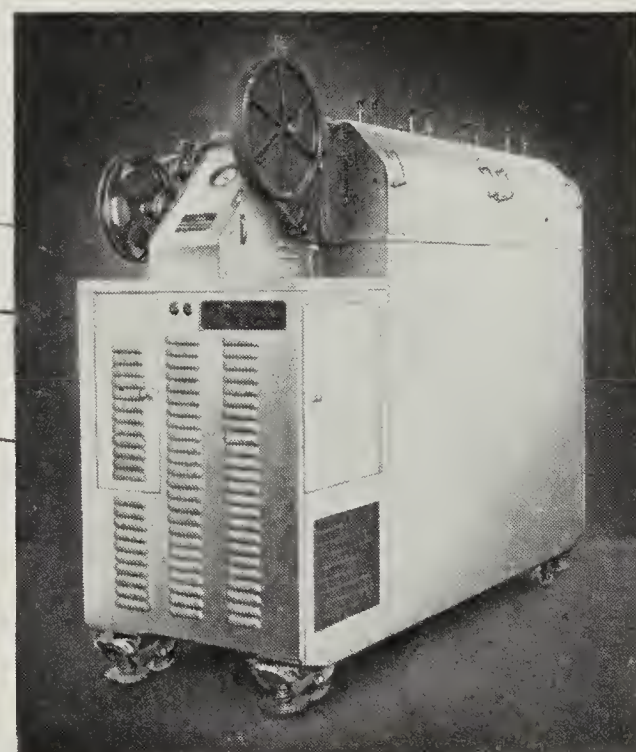
TODAY'S business operations are being speeded and simplified by the use of microfilm and motion pictures. By offering facilities for fast, local processing of such film, the owner of Houston Film Processing Equipment can build a profitable, permanent business.

Users of film are everywhere. Mercantile establishments, financial institutions, government agencies and others use microfilm for copying and recording. Manufacturers and sales organizations use both 16 mm. and 35 mm. motion pictures for training and sales. Studios and photographic supply stores constantly need film processing.

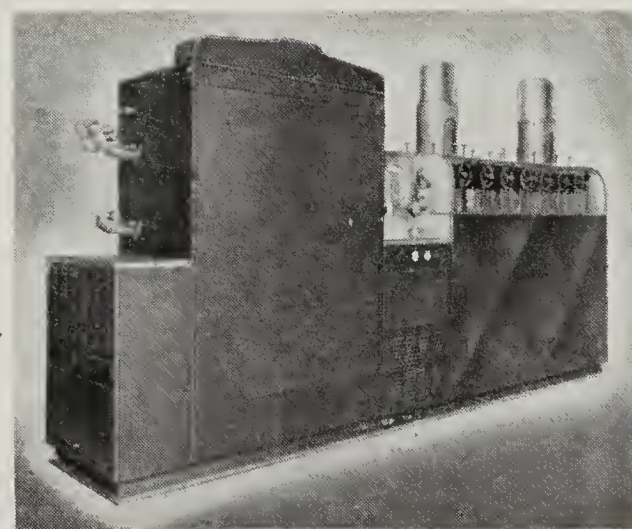
To these and scores of other users of film the Houston owner offers a *needed* service—a service becoming increasingly necessary to every community. Houston equipment is the *proven* answer.

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Houston Film Processing Equipment is designed and built by men who know the needs of this industry. Fully automatic, compact and completely self-contained, these machines require no extra equipment. Write for illustrated folder and prices.

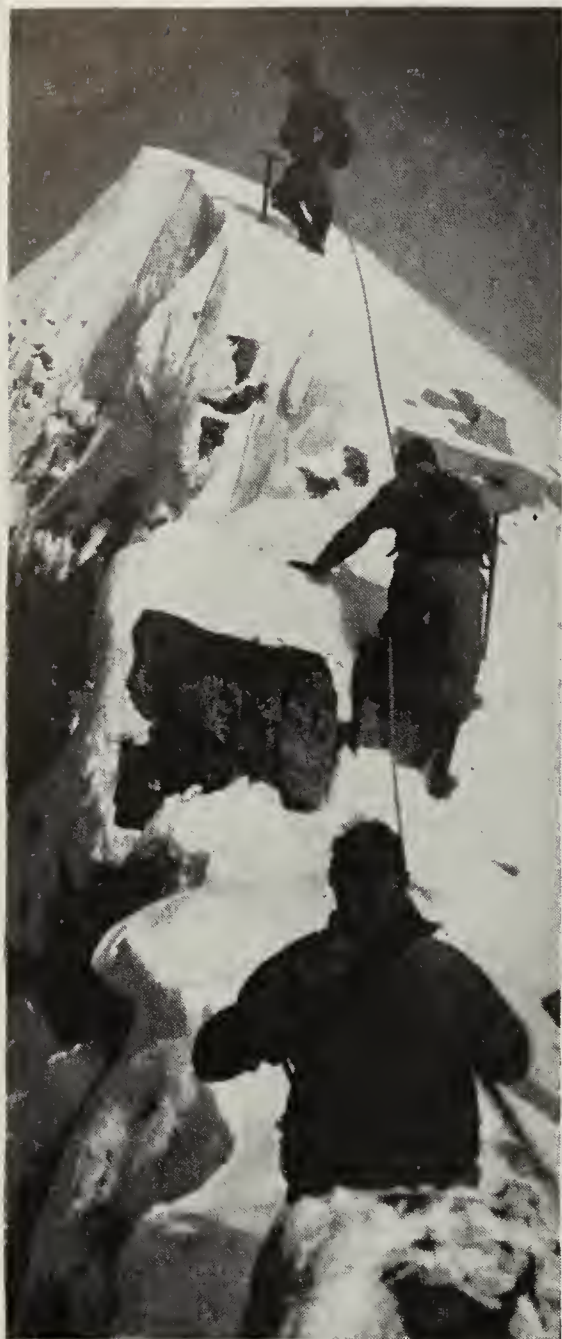


Houston Model 11 — Processes 16 mm. negative, positive and reversal film. Processing speeds up to 20 feet per min.



Houston Model 10 — Processes 35 mm. negative and positive film. Processing speeds up to 2400 feet per hour.

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3 meters in one ...
for better pictures,
for darkroom, and
for balancing light.

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Current Assignments of A.S.C. Members

As this issue of American Cinematographer goes to press A.S.C. Directors of Photography are assigned to the following feature productions:

Columbia Studios

Joseph Walker, "The Al Jolson Story" (Technicolor).

Charles Lawton, Jr., "The Walls Came Down" with Lee Bowman and Marguerite Chapman.

Metro-Goldwyn-Mayer

Ray June, "But Not Goodbye," with Frank Morgan and Keenan Wynn.

Charles Salerno, Jr., "Faithful in My Fashion," with Donna Reed, Tom Drake, Edward Everett Horton, and Spring Byington.

Sid Wagner, "Fiesta" (Technicolor), with Esther Williams and John Carroll.

Hal Rosson, "Three Wise Fools," with Margaret O'Brien, Lionel Barrymore, Lewis Stone, Edward Arnold and Thomas Mitchell.

Monogram

Harry Neumann, "West of the Alamo," with Jimmy Wakely.

William Sickner, "The Shadows Shadow," with Kane Richmond, Barbara Reed.

Paramount

Ray Rennahan, "California" (Technicolor), starring Ray Milland, Barbara Stanwyck, Barry Fitzgerald.

Russell Metty, "The Perfect Marriage," (Hal Wallis Prod.) with Loretta Young, David Niven, Nona Giffith, Virginia Field.

Lionel Lindon, "O. S. S.," with Alan Ladd, Geraldine Fitzgerald.

RKO Studios

Robert de Grasse, "Crack-Up" with Pat O'Brien, Claire Trevor, Herbert Marshall, Wallace Ford.

Leo Tovar, "Desirable Woman," with Joan Bennett, Robert Ryan, Charles Bickford, Virginia Huston.

Roy Hunt, "A Likely Story," with Bill Williams, Barbara Hale.

George Barnes, "Sister Kenny," with Rosalind Russell, Alexander Knox, Dean Jagger.

20th Century-Fox

Ernest Palmer, "Three Little Girls in Blue" (Technicolor), with June Haver, Vivian Blaine, George Montgomery, Frank Latimore.

Harry Jackson, "Strange Triangle," with Signe Hasso, John Sheppard, Anabel Shaw.

Leon Shamroy, "The Shocking Miss Pilgrim" (Technicolor), starring Betty Gable and Dick Haymes.

Arthur Miller, "Anna and the King of Siam," starring Irene Dunne and Rex Harrison, with Linda Darnell and Gale Sondergaard.

Joseph La Shelle, "Cluny Brown," with Charles Boyer, Jennifer Jones, Helen Walker, Sir Aubrey Smith.

Glen MacWilliams, "It Shouldn't Happen to a Dog," with Carole Landis, Allyn Joslyn, Henry Morgan.

Charles Clarke, "Margie," (Technicolor) with Jeanne Crain, Alan Young,

Glenn Langan, Lynn Bari, Hattie McDaniel, Esther Dale.

United Artists

Lucien Androit, "The Strange Woman," (Mars Film Corp.) with Hedy Lamarr, George Sanders, Louis Hayward, Gene Lockhart.

James Van Trees, "Me and Mr. Satan," (Premier Prods) with Paul Muni, Anne Baxter, Claude Rains.

Karl Strauss, "Mr. Ace and the Queen," (Tivoli Prods) with George Raft, Sylvia Sydney, Sid Silvers.

Universal

Hal Mohr, "Shahrazad," (Technicolor) with Yvonne De Carlo, Brian Donlevy, Jean Pierre Aumont, Eve Arden.

George Robinson, "Love Takes a Holiday," with Joan Davis, Jack Oakie, Mischa Auer.

Warner Brothers

James Wong Howe, "The Sentence," with Ann Sheridan, Kent Smith.

Arthur Edeson, "Two Guys From Milwaukee," with Dennis Morgan, Jack Carson, Joan Leslie, S. Z. Sakall.

Ernest Haller, "Humoresque," starring Joan Crawford and John Garfield; with Oscar Levant, Ruth Nelson.

Aerial Mapping War Aid

Post-war aerial photography programs of government agencies and commercial users are far expanded over pre-war days, it was revealed at the annual meeting of the American Society of Photogrammetry, in Washington (Jan. 16-18). Speakers pointed out that because 90 per cent of U. S. military intelligence during World War II was secured from aerial photos, photogrammetry—the science of using these photos to make maps and charts—has a bright future.

Gerald FitzGerald of the U. S. Coast and Geodetic Survey, who, as an Air Forces colonel during the war brought the system of trimetrogon photography—using three wide-angle aerial cameras in synchronization to take horizon-to-horizon pictures—to perfection, was elected the new president of the Society. Vice president is Revere G. Sanders of the Fairchild Camera and Instrument Corporation, who was also honored with the Society's Abrams Award for a paper he had written on stereoscopy.

Bolex Camera Reported Stolen

American Bolex Company broadcasts information on theft of a Bolex camera in Chicago on Dec. 16th, 1945, from auto of William Parker Ward.

Dealers and others are asked to watch for possible offering of sale of the camera, described as a 16 mm. Bolex, No. 13136, with a one inch lens No. 452586, 17 mm. fixed focus f2.7, General Electric light meter, and other equipment.

Any information on the camera should be directed to either the owner, William Parker Ward, 10 South LaSalle St., Chicago 3, Ill., or F. M. Cascaden at American Bolex Co., 521 Fifth Ave., New York.

Government Subsidy and Control for Czechoslovakia Films

Future film production activities in Czechoslovakia will be under the complete control, domination and subsidy of the government, it is disclosed in latest reports from that country. The Czech government has already reorganized its film industry, with a Prague newspaper disclosing:

"The film generally in the new state has been incorporated into the Ministry of Information. The chief of this section is Viteslav Nezval (the most famous Czech living poet and novelist). His advisory body is the Czechoslovak Film Council, which has as members representatives of all the branches of the industry, as well as the Ministry of Education, the Board of Trade, the Institute for the Furtherance of Cultural Relations with the USSR, the film production group, and the Film Workers Union.

"The executive organs of the Czechoslovak Film Council will be the following four committees: Committee for Dramatic Art; Artistic Technical Committee; Policy Committee, and Press Committee.

"All production of motion pictures has been put into the hands of the First Czech Company for the Production of Motion Pictures, which runs all the existing studios and production groups. For Slovakia there is a parallel company. Distribution is centralized and state controlled. Directly state owned and operated are the newsreel company, documentary and instructional units, and the state institute for exhibition, of which one department is the Administration

of State Cinemas; also administration of mobile projection units, works cinemas, school cinemas and sub-standard in general.

"The Czechoslovak Film Institute trains artistic and technical workers, administers the film archives and library, and the film press.

"The Administration of State Cinemas will look after all cinemas (theatres) on Czechoslovak territory. There will be no privately-owned theatres, the reason for which will be obvious to all citizens, considering the important role the film has to play in the life of the nation."

The Czechoslovak studios were virtually unharmed during the war, and the Germans had no opportunity to move out equipment, as happened in other overrun countries. Studio at Barrandow, near Prague, contains 11 stages, two of which are reported to be the largest in Europe at this time.

Most important factor in getting the Czechoslovakian film industry back to normal production along the lines being outlined by the state is raw film stock. None is manufactured in the country, and all such supplies had previously come from Germany. With the latter's film manufacturers still in state of suspension as a result of Allied occupation, there is no assurance when sufficient supplies of positive and negative will be obtained to enable the Czech government to produce on scale planned; although there is a limited supply of negative on hand for some filming for the time being.

During the War—

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produced sound - on - film recording equipment that went to the Armed services.

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We hope to furnish the same high quality and service to our peace-time customers.

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**MANUFACTURERS OF SOUND-ON-FILM
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35mm.

Akeley Camera—7 Sets Lenses, Cases, Extras, Tripod.

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De Brie Model "L" Camera, Astro F2.3 Lens, Motor, Tripod.

Round 2-Inch and 3-Inch Square Filters. Tripods—Sunshades.

16mm.

Bolex Complete with 3 Lenses, 200-Foot Magazine Attached, Synchronous Motor, Camart Tripod, Auricon Recorder—Complete \$1750.00. All Like New.

Complete Maurer D Recorder.

New Presto Disc 78-33 1/3 Recorder, Microphone, Stand, \$350.00.

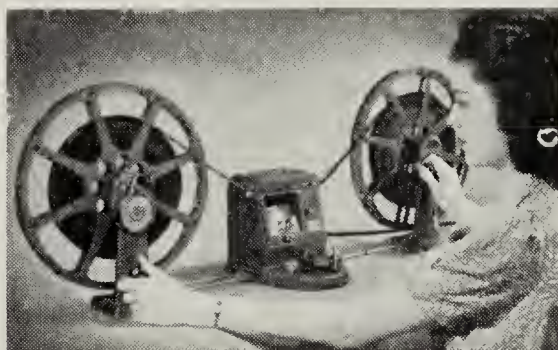
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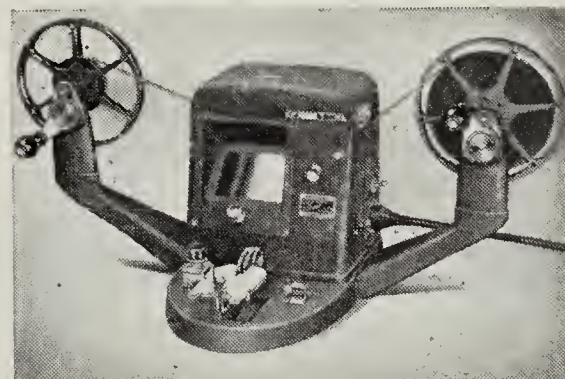
COMPLETE... B & H Filmotion Editors



16mm. The new B&H Filmotion Editor, finest that money can buy, draws the film through a scratch-proof channel, casts motion pictures brightly on a 3x2½-in. ground glass screen, recessed for easy viewing. Framing and focusing controls. Complete with Viewer, Model 136 Splicer, and two Heavy-Duty Rewinds. Parts available separately.

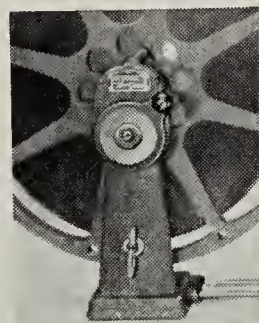
8mm.

The same Editor as described above... with film channel and optical system designed for 8mm. film. Image on viewing screen is 2¼x1¾ in. As in the 16mm. Filmotion Editor, you see your films as actual miniature movies. Spots cutting points easily and quickly. Complete with Viewer, Model 136 Splicer, two Rewinds on extension arms. Viewer can be purchased separately.



SEE YOUR FILMO DEALER NOW

B&H editing equipment is available now at your dealer's... or he can get it promptly. See him, or write Bell & Howell Company, 7148 McCormick Road, Chicago 43.



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Attach rigidly to each side of Splicer. Take 16mm. reels up to 2000 feet. Geared for 2 speeds or "free wheeling."

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The Subjective Camera

(Continued from Page 46)

a sound off camera, and registered fright when she realized that she was not alone. At this point, the camera subjectively assumed the point of view of the killer. The frantic charwoman, directing her attention straight at the lens, backed slowly away; while the camera, simulating the lurching gait of the killer, began to close in on her. Terrified, the woman cowered against the wall as the camera lumbered ever closer, ending up in a stark close-up of her frenzied face. When the fade-out came, the killer had not once been shown, and yet the audience had had the unique jolting experience of having directly participated in a murder.

As with any original cinematic technique, the subjective treatment is sometimes misused. Attempts to go "arty" with the device only succeed in confusing the audience and clouding the dramatic significance of the subject matter.

For instance, some years ago a French film version of "Crime and Punishment" was released on the continent and later shown in certain select theaters in America. Following the *fade-in* in one sequence, the audience found itself gazing up into the faces of three characters who were bending over the camera, gesticulating toward the lens and discussing a fourth character. Over continuous dialogue the scene then cut to a shot straight down at the face of a young man who was awakening. About this time the audience realized that it had been seeing the first three characters from the view point of the young man who was just awakening and whom they were discussing.

This sequence utilized the subjective treatment—but its use in this particular instance was forced. When the scene faded in and the audience found itself gazing up at three strange characters, it is true that certain elements of surprise and suspense were established. But for several seconds the audience was lost, so that a good deal of the dialogue went by unnoticed while the audience struggled to orient itself. Obviously, whatever originality was achieved by the use

of the device was outweighed by the confusion that followed and by the loss of dramatic meaning within the sequence.

A subjective scene cannot simply be tossed into a sequence at any point. It must be motivated by, and definitely linked to, the objective scenes that precede and follow it. For instance, if we had a sequence in which two men were engaged in an argument that was later to develop into a fist fight, we might have a straight objective shot showing the two men in their relationship to each other as the argument began. As the action mounted, over-the-shoulder close-ups would be intercut. Finally there would be a subjective shot of one of the men in close-up directing his dialogue straight at the camera, finally drawing back his fist and aiming it straight at the lens. There would be a quick cut to the other man's face as he received the impact of the blow, and our continuity would be complete.

In a case like this, the one subjective scene would not be merely a trick shot thrown in for haphazard effect, but a carefully planned dynamic device to make the audience experience the impact of the blow as it was struck.

Alfred Hitchcock, who not without good reason is known as the "Master of Suspense," is one of the directors who has used the subjective camera to good advantage. In his precedent-breaking film: "Lifeboat," photographed by Glenn McWilliams, Tallulah Bankhead is shown sitting in the boat while John Hodiak, another victim of the shipwreck, swims toward her. She coolly takes up her hand movie camera and shoots some footage of him as he struggles to reach the boat. At this point, Mr. Hitchcock cut to a subjective angle showing the man as she saw him through the view-finder of her camera.

In this instance, the device was used more for novelty than for any deep psychological effect, although it emphasized a certain facet of Miss Bankhead's character by showing the cool, detached manner in which she preferred to view the struggles of her fellow man. In a film such as "Lifeboat," where the mobility of the camera was necessarily limited by the narrowness of the locale, a shot such as this added an element of variety and cinematic punch to an otherwise straightforward camera treatment.

Mr. Hitchcock, aided by the camera artistry of George Barnes, A.S.C., used the subjective approach even more effectively in one of his more recent films, "Spellbound," a psychological love story. In one sequence the amnesia victim, played by Gregory Peck, is given a drugged glass of milk, and a good deal of the motivation at that point of the story depends upon whether or not he drinks the milk. After a series of straight objective shots narrowing down to a close-up of him raising the glass to his lips, a cut is made to a subjective shot showing what *he* sees as he drinks the glass of milk. As the glass is slowly tipped up, the action in the background

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becomes subordinated by the edge of the glass until the white liquid gurgles up around the lens blanking out the scene for a *fade-out*.

Purists might complain that in this case the device was forced, but actually it added a good deal to the impression that this man was viewing his surroundings in a very narrow way, hemmed in, as he was, by amnesia. It helped the audience to assume his warped point of view.

Again, in the same film, the subjective device was used even more effectively. During the climatic sequence, when the exposed murderer is about to kill the young psychiatrist played by Ingrid Bergman, the camera becomes the murderer's eye. We see what he sees as he sits in his chair with his gun pointed at his victim. In a unique composition we see his hand and gun in the foreground of the frame, and Miss Bergman in the background as he slowly tracks her course of movement about the room. Then, as she convinces him that another murder can solve nothing, he slowly turns the gun on himself (i.e., at the camera) and fires.

The impact of this scene was amazing. Audiences viewing it become participants in expected murder (vicariously, of course), and then became victims of a suicide. They were drawn wholeheartedly into the action and allowed to participate. The suspense was masterfully built to a climax, and the denouncement packed a wallop. "Spellbound" is a better film for so original a device.

Closely allied with this *visually* subjective type of scene is the kind of subjective sequence that pictures the *mental* conflicts suffered by a character. This type of sequence usually takes the form of a montage picturing either the distortions of a dream or the disconnected impressions of a deranged mind. An especially good example of this device was the almost-frightening subjective montage used to portray the nervous breakdown of a character in the film: "Blues in the Night."

This montage, technically one of the finest ever put on the screen took a number of realistic objects from the life of the character, whirled them around, distorted them, and exaggerated certain details, just as a man's mind would do if he were suffering a mental crack-up.

Most dream sequences are not truly subjective—since the camera is still a detached observer, merely recording what the characters are supposedly dreaming. However, the surrealistic dream sequence designed by artist Salvador Dali for the film "Spellbound," held a certain subjective feeling because it showed impressions as they were received by the character, not realistic—but distorted, and shown from his point of view.

Recently the author wrote the screenplay for a two-reel short subject which is *entirely subjective*. That is to say, everything that appears on the screen is shown as it is seen by the main character, so that obviously he himself is never seen until the climax of the film when he appears before a mirror. The il-

lusion of complete subjectivity is heightened by a stream-of-consciousness narration bended with direct dialogue.

It is, of course, self-evident that such a film could only be placed on the screen as a novelty short. A feature-length film done entirely with this approach would become monotonous. However, the use of single subjective scenes or sequences

carefully motivated and executed in a feature-length screenplay (whose subject matter calls for such a device)—can be of immense value in bringing the audience into the story. Properly used, it becomes an integral part of the overall approach of the film, and perfectly utilizes the camera as the "eye" of the motion picture.



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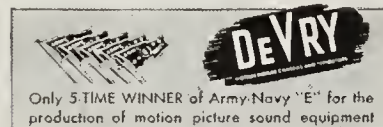


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Shooting AAF Training Films

(Continued from Page 43)

Mitchells. At various times, AT-6s and AT-11s were employed, but type of camera ship depended entirely on air speed required in flight to follow the subject planes of the specific filming job.

Ingenuity on Location

With a small camera crew, and necessarily compact camera equipment flown to the fields for filming operations, it was necessary to continually improvise

various methods to achieve desired results. For example, where moving camera shots were desired, there were no studio running insert cars, with special construction to insure steadiness of the camera, available thousands of miles from Hollywood. So camera parallels were mounted on trucks, and tires of the latter were deflated about half of normal pressure to insure smoothness in operation to secure the required running shots.

At Wright Field, on one assignment, Captain Tutwiler was required to make several interior shots with photoflood lighting; and desks were used for the camera standards. Improvisation was the rule rather than the exception on nearly every film, and the small crew of three versed in film production technique in the studios generally was able to achieve the desired results with quite satisfactory results.

Color and Black-and-White 35mm

During his three years with the AAF photographic unit, Captain Tutwiler used 35mm negative exclusively, and never once was assigned to make 16mm size. Of the large amount of color exposed, it was all 35mm monopack which was processed by Technicolor.

Special Effects Technique Used

Much use of special effects photography was made by Captain Tutwiler, who explains that many instances arose where it was necessary to accentuate specific features for more direct and impressive visual instruction, and background plates were incorporated, especially for close-ups of the actors in the mockups. Of his own air footage, Captain Tutwiler discloses that 95 per cent was actually shot in or from planes, and there was no recourse to miniatures. Only exception was a few instances where plane explosion shots were required by the script.

Navy Blimp as Air Parallel

In making films of the performance of the P-51 (Mustang), script requirements called for complete loops, Immelmans, and other fast air gymnastics. Such shots were impossible to obtain from another plane of any type. So the Air Force called on the Navy for loan of a blimp to allow the camera to remain stationary in the air and follow the intricate and lightning-fast maneuvers of the P-51 while the latter was in flight. In other words, the Navy blimp

became virtually a camera platform suspended in the air 4,000 feet above the ground. Idea of using the blimp for the filming which could not have been achieved in any other manner was generated by Captain Tutwiler and the base liaison officer to solve the problem. Cooperation of the Navy for use of the blimp was readily obtained from the Richmond Naval Air Base, Florida.

Captain Tutwiler utilized a blimp on a second occasion when he was assigned to handle high speed photography on parachute jumps from the B-32. The blimp as an aerial camera platform again solved an otherwise impossible camera problem.

Equipment and Lens Used

Most of the air filming by Captain Tutwiler was shot with a 50mm lens, and at no time did he go beyond a 100mm. His professional reason was that, in extreme long focal length lenses, it is impossible to avoid natural vibration while shooting from a plane.

His filters varied all the way from the 15 to 29 filters and combinations, depending on what effects were required. A rack-over Bell & Howell camera equipped with Zeiss 3.5 lens—all elements of which were coated—was principally used by Captain Tutwiler; while all high-speed photography was accomplished with a special Mitchell speed camera.

Final Assignments

One of Captain Tutwiler's final assignments with the AAF photographic units was the filming of a special instructional reel—top secret—detailing the use and operation of radar in firing guns at night from the big Flying Fortress bombers. It was a highly technical subject in both itself and photographically, and was used for the instruction of bomber crews during the final attacks on Japan.

The P-51 fighter sequence in "The Last Bomb," a special War Department documentary feature in four reels which is to be released through the theatres, was photographed by Captain Tutwiler entirely in Monopack.

Captain Tutwiler is particularly proud of special commendation issued in January, 1944, by Col. P. H. Robey of the XX Bomber Command, Smoky Hill Army Air Field, Salina, Kansas, for his flight and operational training film of the B-29.

Although he had many narrow escapes while with the AAF, Captain Tutwiler did not sustain any sort of injury while on duty. He did, however, sprain an ankle in the surf at Florida while swimming, which only goes to demonstrate that the safer a place seems to be, you can get into trouble!

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Simplified Movie Processing

(Continued from Page 58)

however, numerous "sub-standard" brands on the market which are purchased *without* the processing included, at substantial savings. This doesn't mean these films are of an inferior quality, but simply that the expense of laboratory handling is eliminated, and this saving passed on to the customer. These are the films that may be developed at home in your own darkroom, conveniently, profitably, and satisfactorily. In this group of easy-to-handle films also belong the familiar "positive" type emulsion, frequently used by title makers, and put out by all the leading manufacturers, such as Eastman, Ansco, and DuPont. Of all available varieties, this is undoubtedly the most economical of all.

The beginner does well to limit himself to developing shorter lengths of film, not to exceed about 25 feet at a time, which may be manipulated with little trouble on the type rack illustrated. Also, he is advised to restrict himself to "straight" developing, which is all that is required in title making, when the title cards are made in *reverse* of the way they are to appear on the screen, viz black letters on white cards. The aforementioned positive film is well suited for this work, since it is extremely contrasty.

A glance at the accompanying photographs will be sufficient for those accustomed to darkroom procedure to grasp the technique of the process. To others, the following paragraphs may prove of value.

The film is spooled in the darkroom onto a rack similar to that pictured, which is so constructed that individual film loops cannot overlap, and no portion of the picture surface itself actually touches the rack. The rack is usually made of aluminum alloy or wood coated with some sort of preservative, and should be in such a size as to fit a conventional developing tray, utilizing a minimum of solution. A rack to accommodate film in the length mentioned requires about a gallon of solution.

Ordinary D-72, D-76 or their equivalent, serves as the developing agent. For extreme contrast, such as in title work, D-11 is recommended. After the

(Continued on Next Page)

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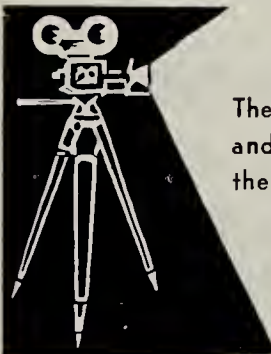
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Simplified Movie Processing

(Continued from Preceding Page)

rack is immersed in the tray, the film is agitated, by rocking, and the rack turned over in the tray occasionally, during the process. Development is carried out to the time specified by the manufacturer of the chemical.

From the developer, the film is removed to another tray containing water or a "short-stop" solution, where it is rinsed thoroughly before transferring to a third tray containing the fixing solution, regular acid hypo and hardener. In the case of reversal processing, however, instead of the film being placed in the hypo, it must first pass through a bleach to dissolve the negative image, after which it is "flushed" to a light source, exposing the remaining silver salts, which in turn will form the positive image, after being *redeveloped*, to bring out this heretofore latent picture. (Bleach may be obtained from Superior Bulk Film Co., 188 W. Randolph St., Chicago, Ill., and numerous other sources.)

It was not the writer's intention to deal with the complexities of reversal processing, but rather to keep the developing process on a simplified basis. In either system, however, when fixing is complete, the film is thoroughly washed in running water until all traces of hypo have disappeared, and then hung up to dry, rack and all. Sponging off excess water helps prevent spots.

Needless to say, the entire developing phase must be handled under a safe-light suitable for the particular type film being developed, which ranges from the comparatively bright orthochromatic red to the very faint panchromatic green.

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(Continued from Page 50)

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AMERICAN INEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

MARCH, 1946

NO. 3

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ON THE FRONT COVER is a photograph on the set of Metro-Goldwyn-Mayer's Technicolor production of "The Yearling," with Director Clarence Brown (directly under camera) running through final rehearsal of scene with Jane Wyman. Director of Photography Charles Rosher, A.S.C., is seated on right side of the camera blimp.



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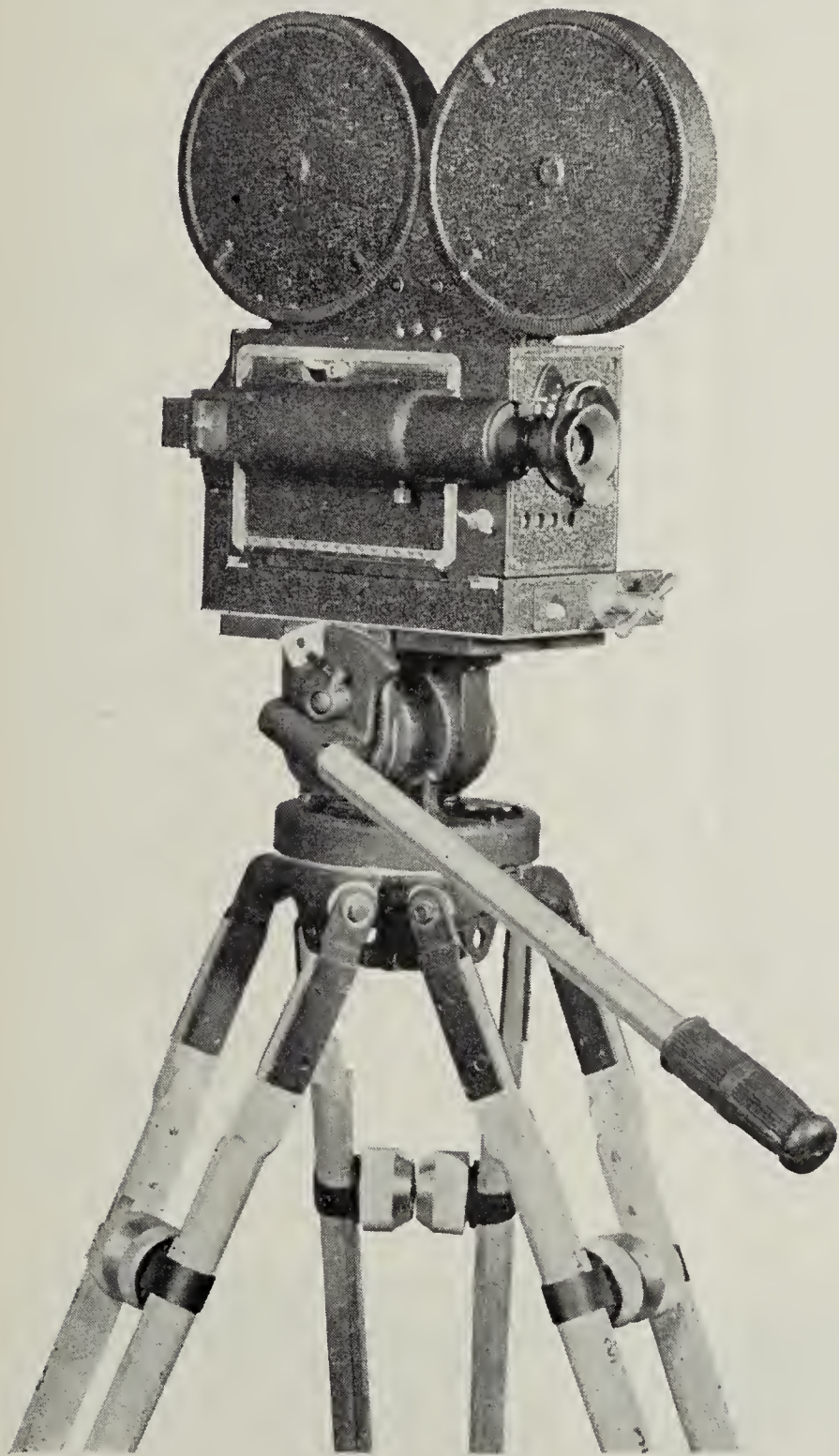
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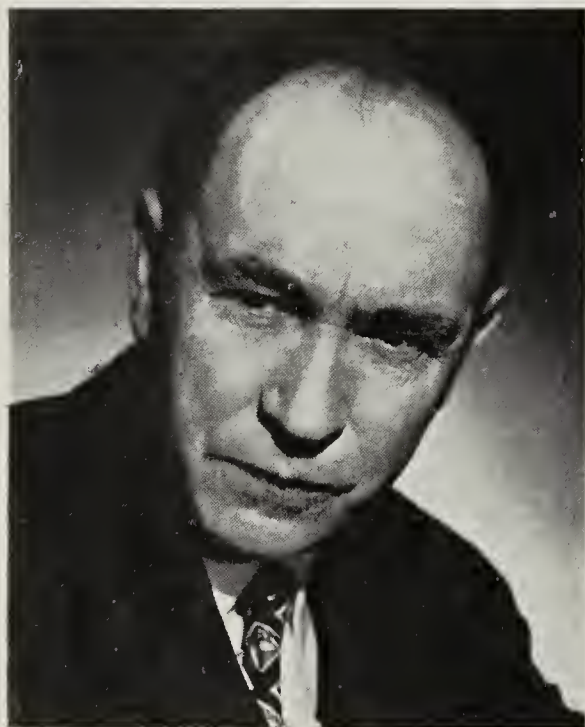
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ACADEMY AWARD NOMINATIONS FOR BEST CINEMATOGRAPHY OF 1945



ARTHUR MILLER, A.S.C.
"Keys of the Kingdom"—20th-Fox.



JOHN SEITZ, A.S.C.
"The Lost Weekend"—Paramount.



ERNEST HALLER, A.S.C.
"Mildred Pierce"—Warner Brothers.



HARRY STRADLING, A.S.C.
"Picture of Dorian Gray"—MGM.



GEORGE BARNES, A.S.C.
"Spellbound"—Selznick.
"The Spanish Main"—RKO.

HERE they are! The outstanding achievements in cinematography on motion picture productions released during the year 1945; selected from the 300 odd feature releases of the year.

And the productions and individual accomplishments of the Directors of Photography responsible, are so designated by the outstanding experts in the field most qualified to make the selections—the entire group of Directors of Photography and members of the American Society of Cinematographers—the latter internationally recognized as the most qualified authorities on the complex photographic qualities necessary for designation as outstanding accomplishments.

Listed herewith are the five black-and-white and the five color productions released during 1945, which are considered the most outstanding by the men who photograph virtually all of the feature products of Hollywood—the Directors of Photography. The combined decision in procedure as set up by the Academy of Motion Picture Arts and Sciences cannot be discounted in its importance and inter-

est for those interested in motion picture photography.

Noteworthy Recognition

There is neither guesswork nor favoritism in selection of either the five nominated productions and their individual Directors of Photography in both the monotone and color fields; nor is there on the final balloting which selects the Academy Award winners in both black-and-white and color photography. Voting in each case is strictly on the merits of the productions submitted to the voters, and their careful analysis of the photographic merits of each entry.

Nomination Procedure

As set up by the special Cinematographic Award Eligibility Committee of the Academy of Motion Picture Arts and Sciences, nomination procedure allows for no haphazard selections, neither does it ignore any film production released during the year.

Each Director of Photography has the opportunity of submitting one black-and-white production, and/or one color production on which he has received single

OUTSTANDING CINEMATOGRAPHY OF 1945

BLACK AND WHITE

"Keys of the Kingdom"—20th Century-Fox—by Arthur Miller, A. S. C.
 "The Lost Weekend"—Paramount—by John Seitz, A. S. C.
 "Mildred Pierce"—Warner Brothers—by Ernest Haller, A. S. C.
 "Picture of Dorian Gray"—Metro-Goldwyn-Mayer—by Harry Stradling, A. S. C.
 "Spellbound"—Selznick International—by George Barnes, A. S. C.

COLOR

"Anchors Aweigh"—Metro-Goldwyn-Mayer—by Robert Planck, A. S. C. and Charles Boyle, A. S. C.
 "Leave Her to Heaven"—by 20th Century-Fox—by Leon Shamroy, A. S. C.
 "National Velvet"—Metro-Goldwyn-Mayer—by Len Smith, A. S. C.
 "A Song to Remember"—Columbia—by Tony Gaudio, A. S. C.
 "The Spanish Main"—RKO—by George Barnes, A. S. C.



LEON SHAMROY, A.S.C.
 "Leave Her to Heaven"—20th-Fox.

or joint screen credit. All such productions so submitted are listed on the nomination ballot, with the Directors of Photography of the industry then voting for five pictures in each classification in order of preference. This cross-section of expert opinion has been found to be the best method of determining the five productions of each classification to be presented as the top nominations for the final vote.

But, although the Academy Award can only go to one of the quintette in each class, the final result will not—and cannot—detract from the outstanding photographic merits of the other four productions and the individual Directors of Photography concerned.

Veteran Cinematographers

Of the ten cinematographers recognized for outstanding photography on productions during 1945—all of whom by the way are naturally members of American Society of Cinematographers—it might be pointed out that all are veteran cinematographers with comprehensive experience on film production—and

all have been top-ranking artists as Directors of Photography for 15 or more years.

Previous Awards Winners

Half of the ten Directors of Photography who have had their productions nominated for the Academy Oscars on productions released in 1945 are previous Academy Award winners, and two have made the trip to the Award platform on two occasions each. Arthur Miller was the recipient for his excellent photography of "Song of Bernadette" and "How Green Was My Valley"—both 20th-Fox releases and both photographed in black-and-white.

Leon Shamroy, nominated this year for his color photography on "Leave Her To Heaven," tabbed the Oscars for color photography on two previous occasions with his "Wilson" last year and "The Black Swan" several years ago.

Ernest Haller, in the running this year with the black-and-white photography on Warners' "Mildred Pierce," received the

(Continued on Page 90)



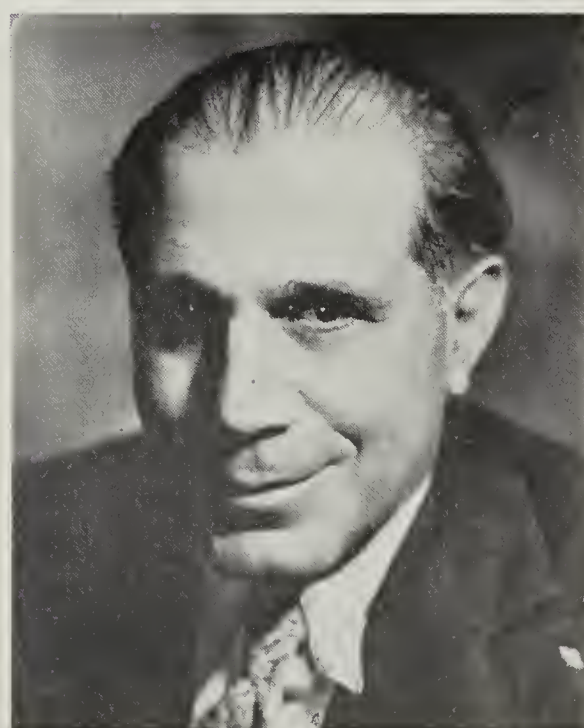
LEN SMITH, A.S.C.
 "National Velvet"—MGM.



ROBERT PLANCK, A.S.C.
 "Anchors Aweigh"—MGM.



CHARLES BOYLE, A.S.C.



TONY GAUDIO, A.S.C.
 "A Song to Remember"—Columbia.

CINEMATOGRAPHY IN THE WAR

FILMING ROCKET PROJECTILE TESTS FOR THE NAVY

With Commander Al L. Gilks, A.S.C.

PHOTOGRAPHING rocket projectiles whizzing through the air at speeds up to 1,500 feet per second! Sounds impossible, but nevertheless was successfully accomplished by a Navy photographic unit headed by Commander A. L. Gilks, USNR, and veteran member of the American Society of Cinematographers.

Motion pictures of the testing and development of rocket projectiles proved a most important contribution in speed-up of the research and perfection of such weapons for use in the war. The rocket program, top secret and top priority, was instituted by the Navy Department in association with the National Development Research Council's rocket program at California Institute of Technology, Pasadena, Calif.

To the scientists and others intimately concerned with the research and development of ground, amphibious, and airborne rocket projectiles, the ability of motion pictures to register the details of launching, trajectory, landing and explosion of a rocket—especially in

view of the terrific speed of such flight—was not initially realized. But fortunately, Commander Gilks was requested to make one film dealing with early tests of barrage rockets launched from small landing craft. In carrying out that particular mission, Commander Gilks was brought into contact with the scientists and engineers charged with the development of rocket weapons, who decided that—in view of the initial filming results—that motion pictures could be of inestimable value to the overall program from many angles.

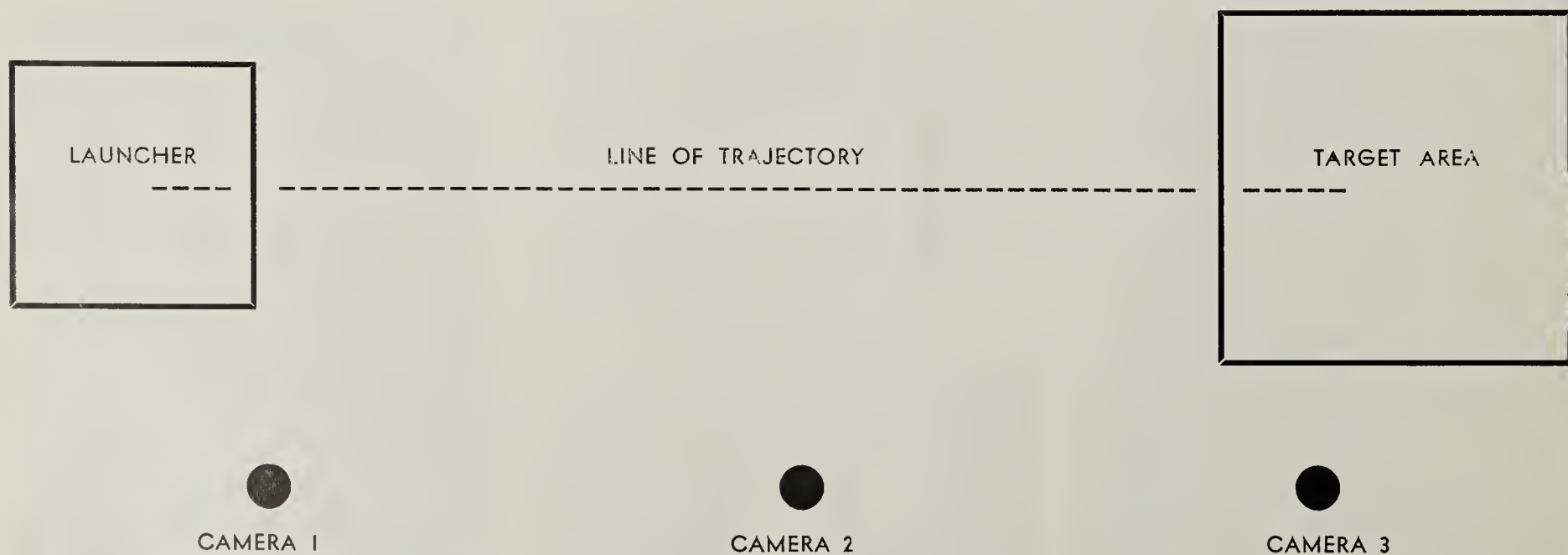
As a result, on his own initiative and with the full blessing of the scientists concerned, Commander Gilks made several short film subjects of other rocket research projects under way at the time. These films, which were actually pioneer visual reports on the tests and developments on rocket weapons, proved so valuable to the scientists and Naval strategists, that Admiral Holmes, USN, naval liaison officer, dispatched a request to General William Donovan, chief of the Office of Strategic Services, asking

that Commander Gilks be assigned permanently to continue such film work. At this point, he was placed in charge of a small—but highly specialized and capable motion picture unit—of members of which had had wide and extensive experience in the studios.

Gilks Veteran Cinematographer

Commander Gilks is a veteran among the Directors of Photography of Hollywood, having been under term contract to Paramount for a number of years in addition to handling assignments at other major studios. With his vast experience and background in regulation production cinematography, he was most qualified to tackle the problem of getting the required results for the scientists and Naval officials on the rocket projectile program.

Navy veteran of World War I, at conclusion of which he held the rank of Lieutenant (jg), Gilks re-joined the Naval Reserve in 1940. Called to active duty as a Lieutenant, he was assigned to photographic duty with the Office of Strategic Services. Immediately after Pearl Harbor, he was sent to the Panama Canal Zone in charge of a photographic unit to make a highly confidential motion picture report on that area—especially the defense setup of that period. The large amount of film shot was most important to the joint Chiefs of Staff, who viewed it as a visual report more detailed and informative than hundreds of thousands of words. The film, for which Commander Gilks received special commendation, was kept as "top secret" during the entire war, but proved instrumental in quickly correcting certain conditions and situations which needed remedying in the Canal Zone defenses. On the Panama Canal assignment, he had under his command a small



Illustrating camera setups for photographing several types of rocket projectile tests. Camera 1 at left—with long focal length lens of two-and-one-half to six inches, depending on requirements—gets detail of launching takeoff in close-up, and follows projectile through to target area. Camera 2—set up midway on line of flight—carries longest focal length lens (four- or six-inch)—catching launching, and providing close-up views in center of flight. Camera 3 also photographs takeoff and trajectory, providing close-up frames in the target area. Great skill was required by the cameramen to keep the speeding rocket in frame during entire course.

photographic unit, but which comprised mainly top-ranking studio cameramen well-qualified for the work through wide experience on foreign filmmaking expeditions and location work.

Pioneering Rocket Photography

Shortly after completing the expedition to Panama, Gilks was sent to Hollywood on temporary duty to procure skilled technical personnel and various photographic equipment for the O. S. S. Navy photographic units. It was during this period that he was requested to do one film project dealing with the testing of barrage rocket launchings from small landing craft.

16mm. Kodachrome Used Exclusively

Commander Gilks, in surveying the problem of photographing the fast-flying rockets, decided that only 16mm. equipment and kodachrome film would be suitable. A large number of important factors dictated this decision. Firstly, the 35mm. cameras were too cumbersome to handle in photographing a speeding rocket projectile—while the cameramen became so expert with the small and lightweight 16mm. cameras that they seldom missed following the rocket and keeping it in the frame, despite the accuracy necessary in following what was little more than a fleeting speck in the sky.

Under the great pressure of wartime development, rocket tests were run off regardless of weather conditions. Color film was essential, as—with black-and-white negative to photograph against a hazy, gray or dirty sky—the color of smoke emitted, color of the flame, and the length of time of burning of the propellant; could not be accurately registered on the film. With monotone negative in bad weather, the smoke and flame would register the same as the background and make the film useless.

With kodachrome, the scientists doing the research were able to get data and information on color of the flame, color of smoke, length of burning time of the propellant—not only at the time of launching and during trajectory—but the same factors when the target was hit.

High Speed Cameras

In the exacting photography required to follow the rockets, normal speed photography was of no value, especially when it is realized that only a few seconds are consumed from the time of launching a rocket projectile until the latter hits the target.

Ninety percent of the photographing on the program was done with high speed cameras turning up at 64 frames per second. Standard 16mm. cameras—EK Cine Special, Bell & Howell, etc.—were used; and hundreds of thousands of feet of film were whipped through with virtually no camera difficulties.

On occasion, cameras rolling up speed of 128 frames per second were employed, particularly on ground tests of experimental firing of the higher-powered rockets from airplane wings. This film



Commander Al. L. Gilks, A.S.C.

detail was particularly desired by the researching scientists for study of high-frequency shock waves on the plane structure.

Pioneering Rocket Weapons

The group of scientists charged with testing and development of the rocket weapons started virtually from scratch, insofar as adapting powders for use as propellants, where exacting characteristics of uniform burning were absolutely essential. General characteristics and burning properties of powders were fairly well defined scientifically, but the adaptability for rocket missiles was an entirely new field. When it is realized that the propellant powder at takeoff from the launching device burns within the space of two seconds, and this particular point required minute and careful study by the researching scientists

because of the major importance of the launching period; the contribution of high speed color motion pictures can be appreciated.

Through ability to study and measure the motion picture frames later, instead of depending on eyes catching details of the propellant burning, the scientists were able to materially increase the perfection of various types of rocket weapons during progress of the program. Gyrations of experimental rockets in flight during testing, as registered on the film, indicated correction in design. The research engineers on numerous occasions, were enabled—through film—to study the action and characteristics of the rocket and propellant down to within 1/500th of a second. It might

(Continued on Page 88)

The Fluid Camera

By HERB A. LIGHTMAN

BACK in the days when the motion picture industry was young and cameras were cranked by hand, the term *fluid camera* had not yet been added to the film-maker's lexicon. In those days the camera was clamped in place and, except for an occasional short tilt or *pan*, it remained a static observer of the action that took place before it. Camera movement was all but unknown. Instead, the action was so directed as to fit within the bounds of the static frame, and when the action became too wide for the frame the director cut to another angle.

Later, when western films of the "Let's head 'em off at th' gulch" variety became popular, the camera was mounted on a truck and went bouncing over the landscape recording the chase. This was the beginning of camera movement as it has developed in our present-day photoplay. But it remained for David Wark Griffith, pioneer of so many of our modern cinema techniques, to introduce camera movement as a definite dramatic device in motion picture making.

The film industry has come a long way since the days of "Birth of a Nation."

Hollywood cinematographers have developed motion picture photography into one of the highest forms of artistic expression. The camera is no longer a static, inhibited machine. It is now a *fluid* force—a device that not only records action, but by its own movement about the sound stage, adds dramatic emphasis and "punch" to the film narrative.

The theory behind the *fluid* camera is a simple one. The camera is the "eye" of the audience, and the spectator sees only as much of the action as the camera sees. But if the spectator were actually present in the situation depicted upon the screen, he would not just stand in one place and restrain his eye from moving about in an effort to follow the action. Rather, he would move around—drawing closer to view this or that bit of action, drawing back to get a better view of the overall situation. The camera, as his cinematic eye, has a right to follow the same course of movement—drawing in, pulling back, narrowing down to some significant segment of the scene. It is as natural for the camera to move as it is for a character in the scene to move about the set.

A sound psychology underlies the use of the mobile camera. Movement purely for the sake of movement is an abuse of an otherwise forceful technique. The intelligent director or cinematographer moves the camera only when the demands of the filmic situation motivate that movement. Correctly used, the mobile camera produces a fluid continuity—a smoothly-flowing interplay of changing compositions within the individual scene. These compositions change and vary from extreme long shots to extreme close-ups without the harshness of a direct cut. Thus the audience's attention is held without mechanical interruption to the subject-matter of the scene.

There are several types of camera movement, and each device has come to be known by a specific name. The *follow shot* is one of the most common techniques and, as the name implies, it is used to follow the action of one or more characters within the scene. Usually this is accomplished by a simple *tilt* or *pan* or a combination of the two. Frequently, however, it becomes necessary for the camera to follow a player over a wide stretch of terrain. When this is the case, the camera is mounted on a *dolly* or camera *boom* and we have what is known

(Continued on Page 102)



Getting an overhead closeup. Director of Photography Leon Shamroy, A. S. C., directly behind camera in dark suit, making final checkup for scene of Betty Grable in "The Shocking Miss Pilgrim," a 20th-Fox production.

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A Positive Vari-Focal View Finder For Motion Picture Cameras

By FRANK G. BACK

The author, Frank G. Back, M.E., Sc.D., is associated with the Research and Development Laboratory, New York.

Presented at recent Technical Conference of Society of Motion Picture Engineers, and published in December, 1945 issue of SMPE Journal. Reprinted by special permission.

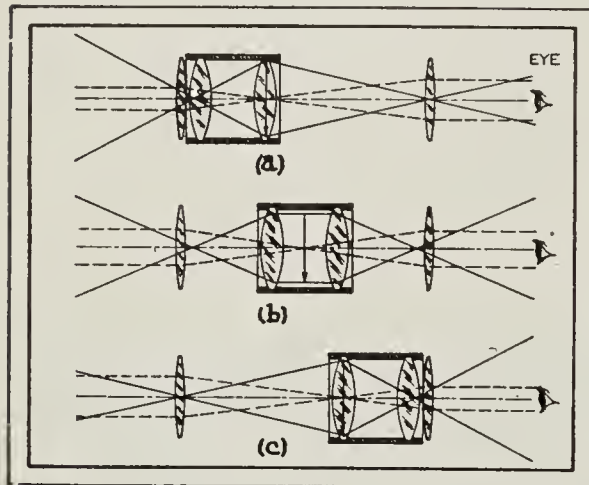


Fig. 1

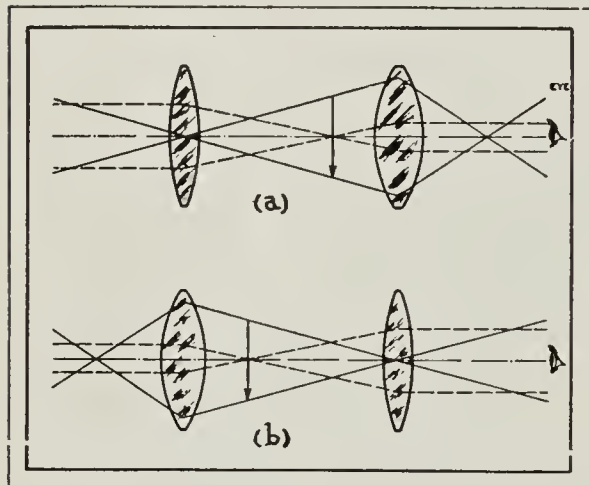


Fig. 2

A new positive vari-focal view-finder for motion picture cameras eliminates the disadvantages of the two classes of finders now in use. The new view-finder uses only positive elements, thereby producing an upright real image. And it is possible to secure this real image in a frame of constant size. The image becomes variable over a wide range along a smooth and continuous curve instead of by intermittent steps as in the case in some other types of finders.

The two classes of finders presently used secure images by two different methods. One limits the fields of different camera lenses by mechanically changing the size of the frame which surrounds the image. The second class changes the field by optical means.

In the first class, we see that the image frame gets smaller as the focal length of the camera objective increases. The disadvantages of this are apparent. Those finders of the second class which change the field optically do one of two things: they change the frame size, as in the first class, or they produce only virtual images which do not frame distinctly. Negative-type finders, as described, also have large parallax error. This is particularly true when the eye is displaced. One other type of view-finder having a turret-head might be mentioned here. Its evident disadvantage lies in the limitations placed upon it by the number of optical elements in its turret-head.

The vari-focal system of the new positive view-finder is based, of course, on the principle of the astronomical telescope. The finder adds to this principle certain other features which give it decided advantages. In the astronomical

telescope, magnification is determined by the ratio of the focal length of the front lens combination to the focal length of the rear-lens combination.

Thus, a long focus front lens combined with a short focus rear lens gives us magnification. Fig. 1 (a) illustrates this clearly. Conversely, a short focus front lens coupled with a long focus rear lens brings about reduction, as seen in Fig. 1 (b).

The new positive view-finder uses a front lens and a rear lens of approximately equal focal length. The front and rear lenses do not move and are known as "stationary lenses." The variation is obtained by two lenses of shorter focal length mounted in a barrel with the view-finder housing between the two stationary lenses. These two shorter focus or "variator lenses" can be moved forward and backward from the front stationary lens to the rear lens. The movable barrel in which they are mounted is called the "variator."

This is how the variator operates: The stationary, and variator lenses are computed in such a way that when the variator is in the extreme front position, the combined power of the stationary front lens and the first variator lens is such that the inverted real image produced by them falls on the second variator lens. Fig. 2 (a) shows this. Thus the second variator lens acts as a field lens in this position and does not participate in the forming of the image. So far, the vari-focal system acts as a telescope that has a short focus objective and a longer focus rear lens, producing a reduced image covering a wide-field angle, as with a wide-angle lens.

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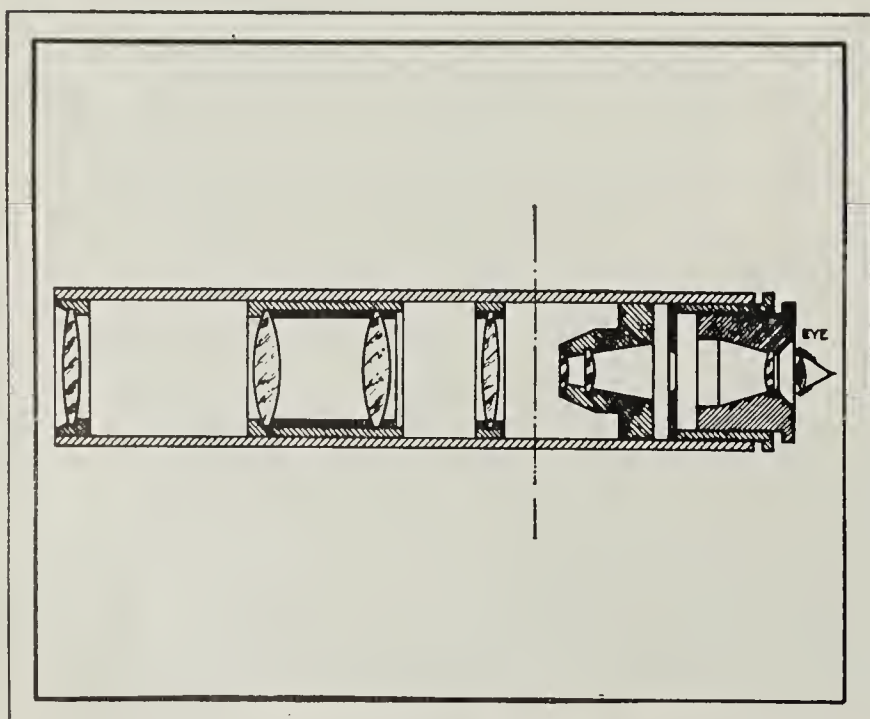


Fig. 3

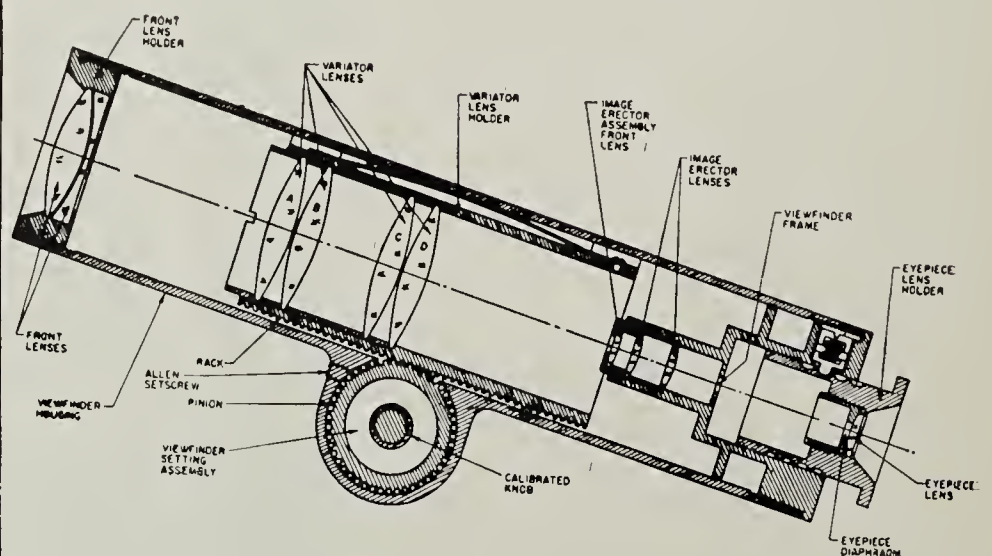
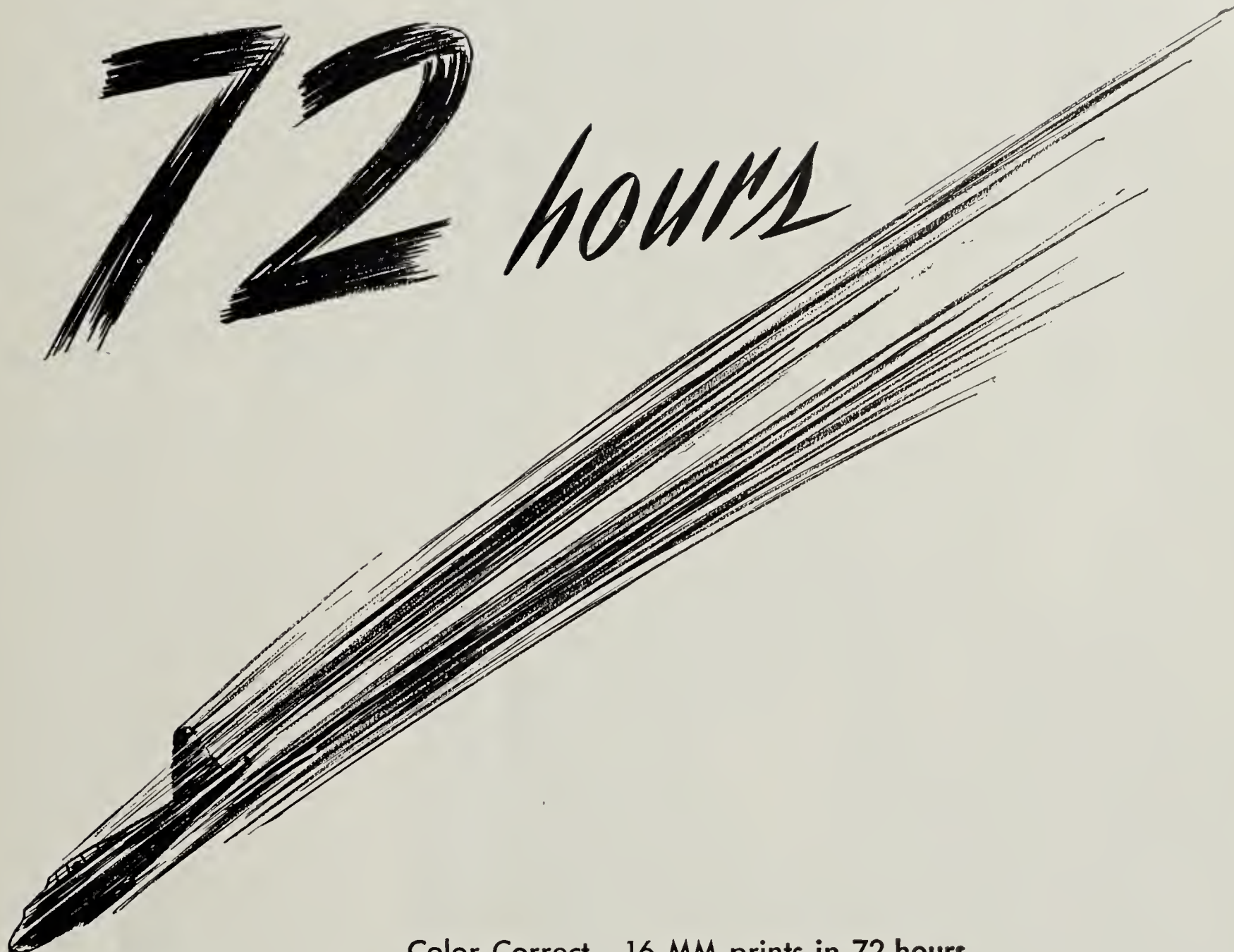


Fig. 4

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ACES of the CAMERA

Paul Eagler, A. S. C.

By W. G. C. BOSCO

K ISMET, as the sage said, or should have said even if he didn't, is a wonderful thing. Who would have thought f'rinstance, that because tailors once used a rubberized adhesive tape to hold up the cuffs on men's trousers, that it would have an influence either directly or indirectly on the future of the film industry. And yet, so intricately are the skeins of fortune woven, that such was the case.

You see, the subject of our little biography this month, Paul Eagler, A.S.C., had a father who was a tailor; and in

the year 1900 he not only gave Paul a magnificent magic lantern, he also brought him home the paper strips in which the above mentioned rubberized tape came wrapped.

Now the paper from this tape was, oddly enough, about 35mm. in width and came wound on spools in lengths of approximately 100 feet. And young Paul, who tired very quickly of the static quality of his magic lantern pictures, found out that he could simulate movement by cutting progressive pictures on this paper tape and jerking it through

his magic lantern. The results, alas, were not what you might call completely satisfactory, but Paul was very young at the time, easily pleased, and so ecstatically happy over the results that it provided an avenue for his youthful inventiveness and subsequently influenced his choice of a career. And so we feel that we have proven, even though laboriously, the proposition set forth in the first paragraph; because while there may be some who would be loathe to admit that the special effects men are the backbone of the industry, there must be few who will deny that they form a most important vertebra. Particularly is this true of men like Paul Eagler, who, in growing up with the industry, have contributed so much to its spectacular technical achievements.

Soon after Paul's original attempt at movie-making a traveling show came to the small town of Newman, Illinois, where he was born and living at the time. It was typical of the shows that played to hinterland audiences at the turn of the century. There were vaudeville acts, song-slides, and during the intermission, real, genuine two-minute movies.

To Paul the movies were inspirational, and in his youthful eyes merited all the superlatives claimed for them in the lurid advertising. He made up his mind to find out what was in that portable asbestos booth. All he could get was a look, but he decided that the projector was a magic-lantern with some sort of hand-cranked clockwork. That was when the good people of Newman began to hide their clocks, and Paul's original magic-lantern underwent numerous drastic remodellings.

When the traveling show came back to the Newman Opera House the manager-ticket taker-projectionist couldn't get rid of Paul. So he bowed to the inevitable and let the young enthusiast crank the projector.

Thus, at the age of eleven, he made his debut as a projectionist. He was told that when he came to the finale, 25 feet of hand-tinted American flag floating proudly in the breeze, he must crank through, then crank it back, and then crank it back again; making seventy-five feet of film in all, and assuring a thunderous applause for the finish. That this feat could be accomplished seemed impossible to Paul. But the projectionist quickly reassured him. "A flag floating in the breeze," he said, "is a flag floating in the breeze. No matter which way you crank it." And sure enough, Paul found that the man was right. It was his first intimation of what could be perpetrated on a gullible public with the aid of a camera and a projector.

By 1905 Paul was a showman in his own right, with what was perhaps one of the first store-shows in the State of Illinois. The occasion was a lusty, 4th of July celebration which the citizens of Newman made to last three days; and the vehicle our youthful impressario used to gather in the nickels from his fellow

(Continued on Page 104)

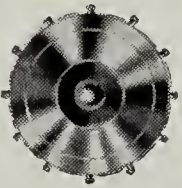


film threading time . . .
27 seconds

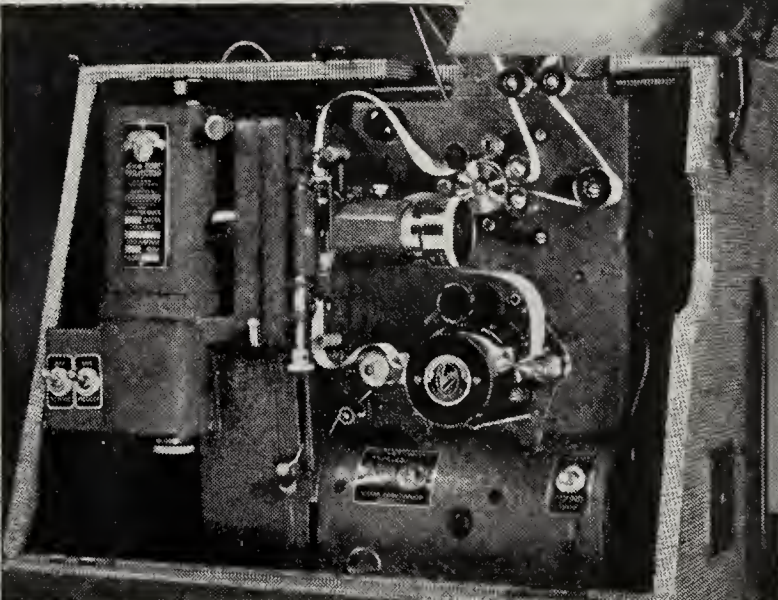
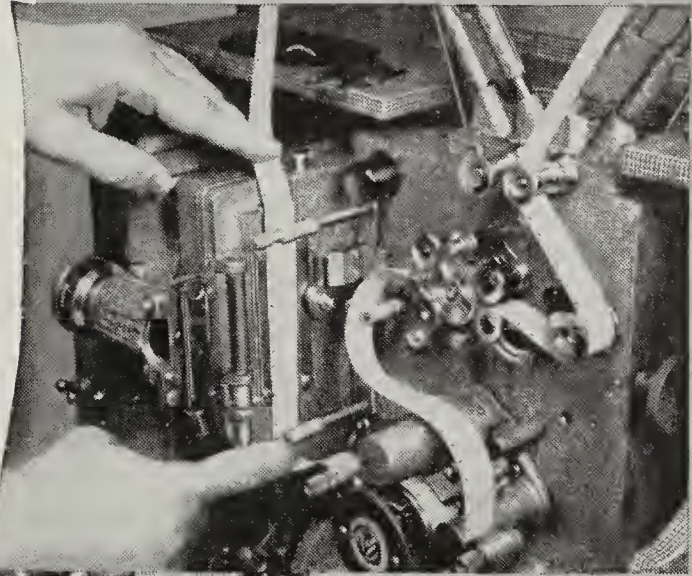
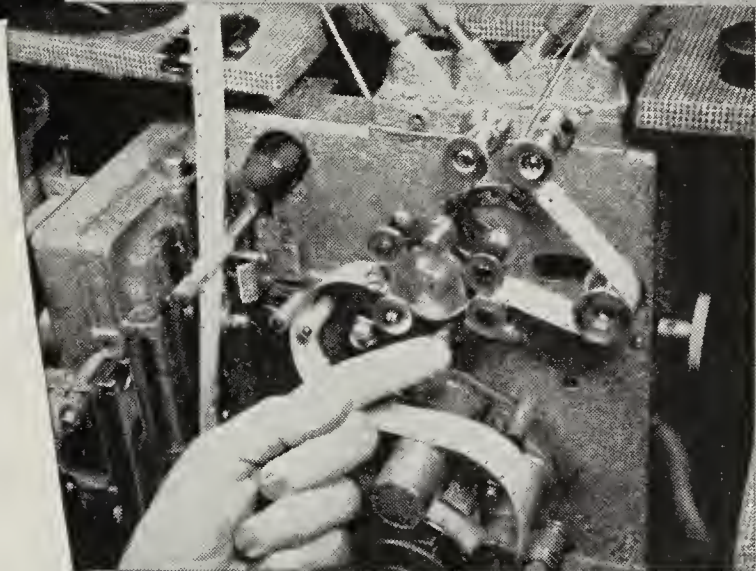
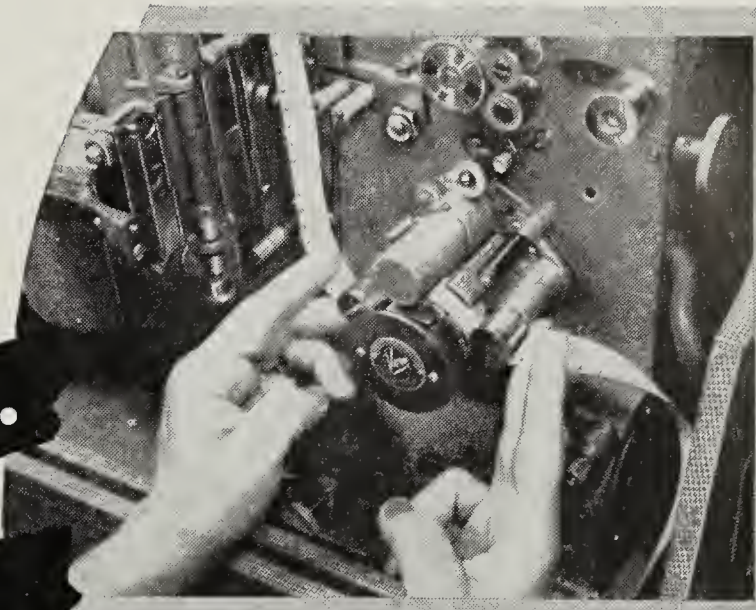
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Over the sound drum . . . under the large sprocket . . . into the easily accessible film channel—these are the simple highlights of threading a Victor. Yes, fingers—young and old—quickly learn this easy lacing. The reason is . . . simplicity . . . more finger room.

Such exclusive Victor features as 180 degree Swing-Out Lens Mount, Duo-Flexo Pawls, Spira-Draft Lamp House, and Safety Film Trips give greatest protection to valuable films. Both new and experienced operators prefer this extra security and trouble-free operation. Yes, your films are safer—as well as being brilliantly projected—with a Victor.



Check this Victor Oversize Sprocket. Note the greater film surface . . . five teeth engage the film (instead of three as in ordinary projectors).



The
ANIMATOPHONE
 16mm Sound
 Projector

VICTOR ANIMATOGRAPH CORPORATION
 Home Office and Factory: Davenport, Iowa

New York (18) McGraw-Hill Building, 330 West 42nd Street • Chicago (11) 188 West Randolph
 MAKERS OF 16MM EQUIPMENT SINCE 1923

Filming Rockets

(Continued from Page 81)

be pointed out, in order to provide time information, the dial of the cameraman's stopwatch was registered at the end of each high speed shot to provide the scientists with exact timing when the film was studied in detail.

Many Rocket Weapons Developed

The scientists and photographic unit were concerned with many types of rocket weapons under development for various uses in offensive campaigns. Each development followed a set procedure and program. Initial test was on the ground from a stationary launching site, with missile aimed at target area 1,500 to 2,500 yards distant. Although the scientists and military observers were stationed behind concrete shields a safe distance of one-half mile from the range, it was necessary for members of the camera crew to get within 500 yards—operating in the open with long focal length lenses of four and six inches. General procedure was to set one cameraman directly opposite the launching site, a second mid-distant between the launcher and target area, and the third opposite the intended target area.

With the rocket projectiles travelling anywhere from 600 to 1,500 feet per second, the cameramen could not use tripods, but each panned the entire line of flight with hand-held cameras. The men became so expert in the work that they seldom missed following throughout the trajectory from the time of launching till target was struck; thereby gaining invaluable ballistic data.

In the early stages of experiments with new rockets, higher-powered propellant powders, and fuses, both the scientists and cameramen were placed in most hazardous and dangerous situations. They had to be alert for anything to happen. Premature detonation of experimental fuses would shower hot and jagged fragments of steel in all directions, and on one occasion, the magazine was knocked off a camera by flying steel. Miraculous escapes were the rule rather than the exception.

Stressing Safety Factors

Safety of the operators of the missile launchers, either from amphibious craft or airplanes, was of major importance in the tests and developments. After the initial ground tests, a stationary plane wing was set up with launching bracket attached. Exhaustive tests were then made to study—through the films—the stress and strain of the launching shock when the rocket was sent on its way. After insuring stability of the plane wing, next step was launching from a regular plane placed on a wooden ramp with tail lifted into flying position; motor turned over at normal speed; without pilot or mechanic aboard; and rocket fired via remote control. At this point, three cameras—turning at normal, 64 pictures per second and 128 pictures per second—were employed. Resulting film provided the scientists with details

on the blast effect and shock waves of the projected rocket on a plane in flight.

Final Tests from Plane

After assurance of the uniformity of a particular type rocket in performance, final tests in firing from a plane in flight were instituted. Cameras photographed launchings from an accompanying plane 10,000 feet in the air—generally over a desert range. This provided further information for the scientists before green light was given for final tests where the rocket-launching plane flew in at low levels at indicated ground targets.

Virtually the same procedure was followed in all phases of rocket development, which covered also launchings from the ground, surface craft, submarines, etc. Many types were developed and designed for special purposes.

Films to Chiefs of Staff

When the specific rocket and launching device for either air, ground, or sea use was felt ready, a concise film on the type was edited to show pertinent points in the development, handling, and effectiveness of the final tests. These films, on account of the urgency and need of rocket weapons in warfare, told the entire story with a minimum of titles. Time was not wasted on recording a descriptive dialogued soundtrack, as such a procedure would consume most valuable time through extra processing.

Each film, as completed, was sent to Washington for viewing, and the visual reports on intimate phases of the action and performance of each particular rocket missile vitally speeded up adoption and utilization in the field. Prints of each subject were then sent (as top secret material) to air, ground, naval and other forces for viewing by commands to ascertain adaptability in their individual campaigns.

From these short and concise films on each specific rocket development, officers and commands charged with making decisions in the field were able to better evaluate the combat and military value of the weapon depicted than through the previous procedure of providing them with long and lengthy written reports which previously had been highly technical and consumed much time of the top command to read and evaluate. The visual reports were far easier for military strategists to evaluate for combat use, with consequential speedier installation in warfare.

By August, 1944, total of 77 reels on rocket weapons and projectiles made by Commander Gilks and his camera unit, were in the library of National Development Research Council for loans to Navy, Army, and Marine strategists and officers. The subjects, in addition, served as most valuable training and instructional films for officers and personnel on each type of rocket weapon in the early introduction of the latter on various battle fronts before specific training films of handling and operation could be turned out. In numerous cases, the test and development film subjects served

for training and indoctrination of officers and men of the armed services.

Commendation on Film Project

As the photographic accomplishments of Commander Gilks and his small but compact crew progressed on the rocket program experiments and developments, the unit received continual commendation for its results and the initiative and inventiveness in overcoming seemingly impossible obstacles in achieving seemingly impossible photography in a most vital war program.

E. C. Watson, official investigator of National Development Research Council at Caltech, completely summarized the entire film program on rocket projects with a report to Washington which stated;

"Such films are of particular value during the early stages of the development of a new weapon when its tactical uses and its characteristics are still being explored, and when no nucleus of personnel familiar with the weapon is available.

"The Films are used constantly to acquaint visiting scientists, and Army and Navy officers, with the nature of these new developments. They also resulted in a great saving of time and expense to us and to our increasing number of military visitors, as it was unnecessary to stage special demonstrations for them with consequent loss of time.

"The films are of definite scientific and technical value, being particularly useful in study of blast effects on launchers and of launchers reactions, in fuse, fragmentation and explosion tests, and in tests of flash effects."

Later, Watson advised General Donovan: "filming of field and range tests, are not only valuable in the research and development work itself, but of especial value in bringing about the acceptance of rockets by the fighting services, in getting them into combat use promptly, and in training military personnel in their use."

Special commendation in 1945 was issued by the Chief of Naval Operations for "the valuable color film made by the photographic unit under Commander Gilks." A State Department representative wrote Commander Gilks, "I know only too well what incredible results you have obtained in filming rocket projectiles."

Praise for Unit

Commander Gilks, in disclosing the film activities in the rocket projectile program during the war, lays particular stress on the success of the assignment to the members of his unit. He mentions the late Jack MacKenzie, jr., chief photographers' mate; the late Edwin Roach, photographers' mate both of whom were killed last year in an auto accident returning from a particularly dangerous flying mission; and photographer, first class, Herb Wolf, who was injured in the same crash. He also points out the important contributions in the project of chief photographer,

(Continued on Page 101)

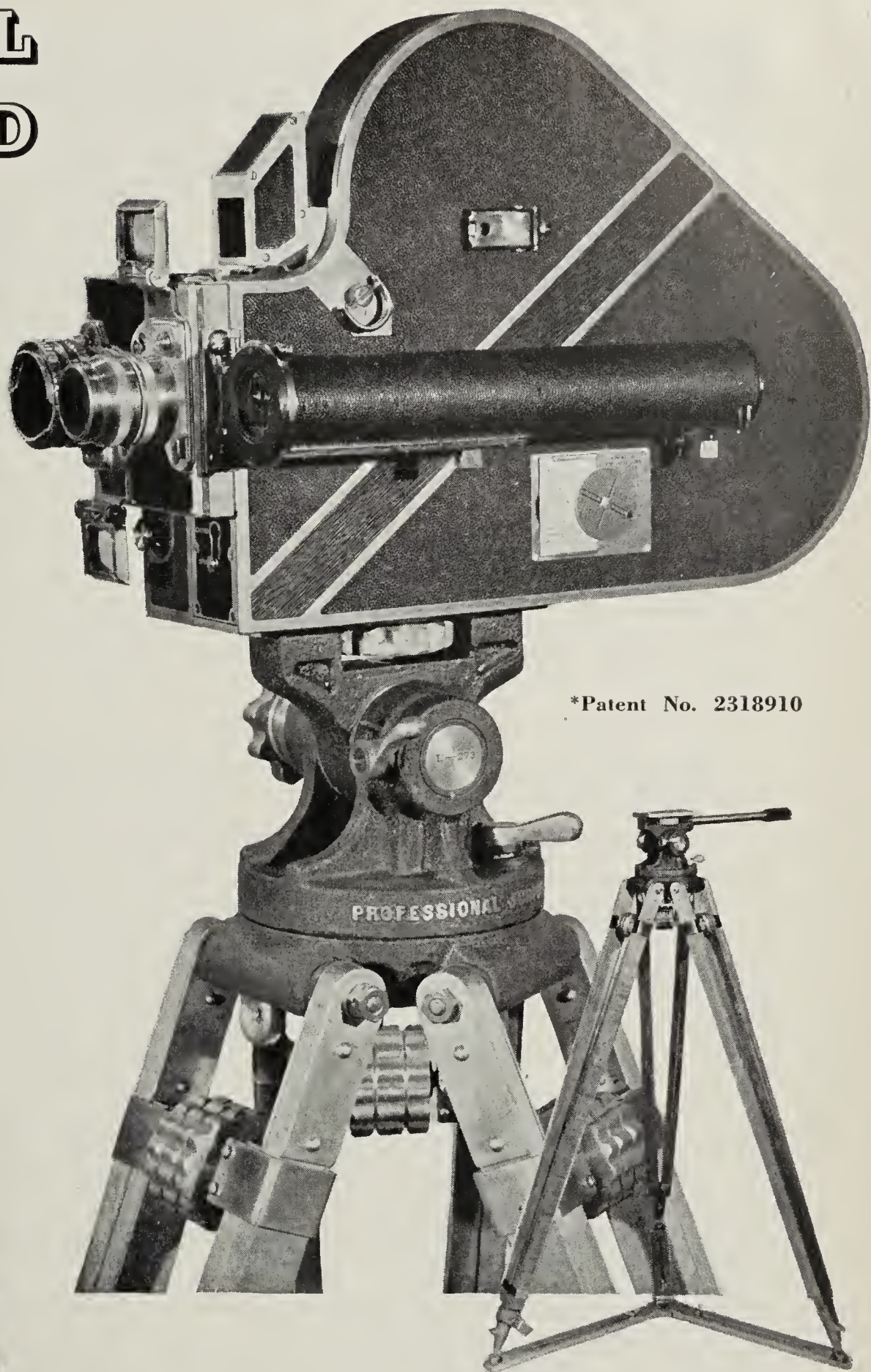
"PROFESSIONAL JUNIOR" * TRIPOD

*with Removable Head
Now Available!*

*Acclaimed the finest for
every picture taking use.*

The friction type head which is unconditionally guaranteed for 5 years, gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor or Baby "Professional Junior" Tripod base. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

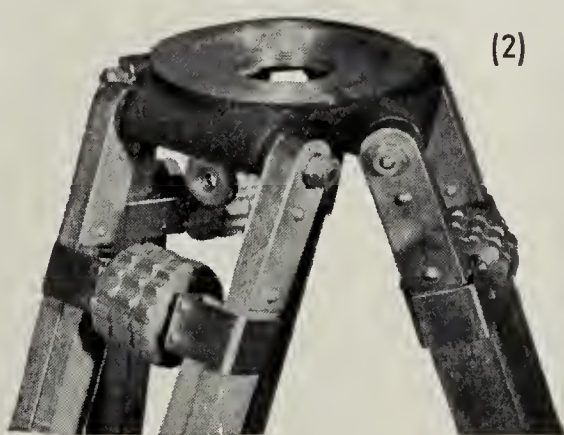
The standard size tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest.



*Patent No. 2318910

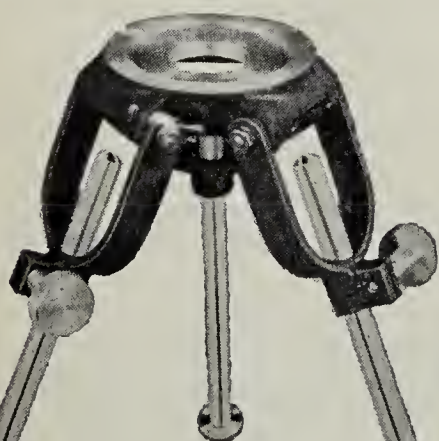


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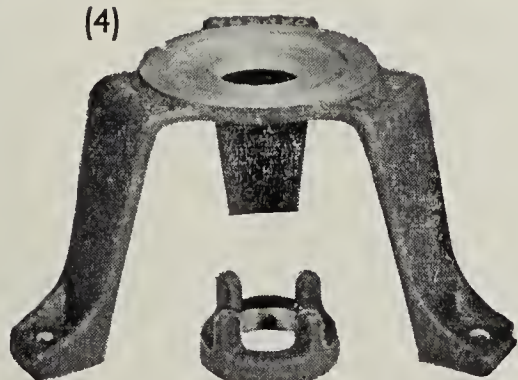


(2)

(3)



(4)



Adaptability: here are illustrated (1) the friction type removable "Professional Junior" tripod head that may be affixed to (2) the Standard Tripod Legs Base and (3) the new all-metal "Baby" tripod and (4) the "Hi-Hat" by simply fastening the finger-grip head fastening nut that is shown under it. Note the positive-locking, fluted, height-adjustment knobs and tie-down rings of the Standard Tripod Base which is standing on a Triangle.

Now Available to Camera Owners and Dealers

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading News-reel companies and 16mm. and 35mm. motion picture producers.

The new "Professional Junior" Baby Tripod, shown ready for the Removable head, weighs 5½ lbs., is made of Aluminum with Dural legs having spurs. Extended height—21 inches, depressed—16 inches. It's compact and sturdy. Quality throughout.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

Solar Aircraft Acquires Fonda Machinery Co.

Patent and manufacturing rights on film processing equipment and developing machines previously turned out by Fonda Machinery Co., has been acquired by Solar Aircraft Company. The latter, which produced highly-precision parts and accessories for airplanes during the war, has factory space, skilled machinists and toolmakers, and necessary machinery to greatly increase the output of Fonda film developing equipment.

Fonda Film Processing Equipment Division of Solar Aircraft Company has been set up, with sales and display headquarters at the former Fonda plant, 8460 Santa Monica Blvd., Los Angeles.

John F. Van Leuvren, original designer of Fonda developing machines, remains with the new company; while John Tuve continues as production man-

ager of Fonda equipment for Solar. Clayton Wall, formerly with the Army Air Forces at Wright Field, is designing engineer.

William Prager, associated with the AAF photographic division during the war, becomes sales manager of the Fonda division of Solar. Prager is widely known in the film industry.

Acquisition by Solar eliminates the production bottleneck of Fonda, which was forced to limit output because of restricted manufacturing facilities. New deal provides factors for volume production of the Fonda developing machines to meet the widespread demand from all parts of the world. Fonda equipment allows for processing of both 35 and 16mm. film.

Wall Sound Cameras Again Available

Widely recognized as "the most successful news reel camera", the Wall 35mm. sound camera, manufactured by St. George Recording Equipment Corp. of New York, won new laurels during the war when eighty of these sound cameras were constantly in use by the Army and Navy without a single unsatisfactory report. Compact, light in weight and sturdy, these cameras proved easy to handle under the most difficult conditions of desert and jungle fighting and "stood up" under long, strenuous service. The Wall sound camera has been used for Fox Movietone films since 1928. The entire Wall outfit weighs only 37 pounds and is simple to operate. One man can easily operate both sound recording and photography. The sound system is battery operated.

The Wall camera can be used for regular studio photography, without sound, when desired. It is free from "blimping". Bausch & Lomb Baltar lenses are used. These have proved superior to any foreign lenses.

St. George Recording Equipment Corp. announces that it has a limited number of these Wall 35mm. sound cameras available for immediate shipment. Each outfit comprises the following:

Wall camera-single system sound—complete with Bausch & Lomb Baltar 50mm. f.2.3 coated lenses, Bausch & Lomb Baltar 75mm. f.2.3 coated lens, Bausch & Lomb Baltar 100mm. f.2.3 coated lens, Bausch & Lomb Baltar 152mm. f.2.7 coated lens, modulite galvanometer, camera case—carrying, camera accessory carrying case—consisting of 1 matte box, Bausch & Lomb Baltar 35mm. f.2.3 coated lens, magazine belt tightener, six collapsible film spools, four bakelite film centers, 1000-ft. and one 400-ft. magazine leading hooks, filter holder container with nine double and

three single filter holders. Oil can, pair pliers, screwdriver, bottle of camera lubricating oil—good for 80 below zero; tripod (pan) handle, crank handle, three camera belts—small, medium, large, amplifier, amplifier carrying case, amplifier accessory carrying cases, consisting of two camera power cables, two 50-ft. microphone extension cable, two galvanometer cables, two amplifier power cables, two sets of earphones, four exciter lamps, two microphones with cable, gooseneck and baffle, two microphone tripods, camera portable power pack shoulder carrying strap with six nonspillable storage batteries and 3-4 volt, 2-6 volt, 1-12 volt outlets, vibrator pack with six nonspillable storage batteries, magazine carrying case with two 1000-ft. magazines, baby tripod with carrying case and hy-hat, tripod with freehead and boot and saddle, triangle and magazine carrying case with four 400-ft. magazines.

Telefilm Constructing Film Storage Vaults

Telefilm Studios of Hollywood has under construction a large air-conditioned, steel-reinforced concrete vault for film storage. In addition to providing space for the increasing number of 16mm. negatives of Telefilm product, the vaults will be made available for storage of films for other commercial and industrial producers in the industry.

"It's All Yours," by Steiner

William Steiner, A. S. C., recently completed photography on a ten-minute short, "It's All Yours," at the Willard Studios in New York. Reel, narrated by Ralph Bellamy, is designed to promote extra-curricular reading by high school students.

Best 1945 Cinematography

(Continued from Page 79)

Academy Award jointly with Ray Rennahan, A.S.C. previously for "Gone With the Wind."

George Barnes, who has nominations in both classes with Selznick's "Spellbound" in the black-and-white, and RKO's "The Spanish Main" in color, also previously won an Academy Award for photographic direction on "Rebecca." Tony Gaudio, in the color nominations this year with Columbia's "Song to Remember," was a previous Academy Award winner in cinematography for his splendid photographic work on Warners' "Anthony Adverse."

Final Selections

Selection of the photographic achievement to be designated for the Academy Award in Cinematography is made through vote of the Directors of Cinematography for one of the five nominated productions in both the black-and-white and color divisions. The production receiving the highest number of votes is adjudged the winner, with the Director of Photography individually responsible for the photography receiving the Academy Oscar; which is considered the highest recognition of motion picture photographic achievement for the year.

Recognition for Special Effects

Although the spotlight is on the directors of photography for their motion picture cinematography in the Academy Awards, the recognition of Special Effects for an Oscar cannot be discounted. The wizardry of the process and special effects photographers, who provide realistic illusions for the finished pictures which could be attained through no other means.

Because of the complexities of analyzing the final results of special effects photography, the Academy President appoints a committee of 15 technicians who are familiar with the intricacies of special effects photography in releases of the year. Final consideration narrows down to five productions, with committee making selection of the recipient of the Oscar winner from this quintette.

Basic requirements for judging of Special Effect achievements are:

Dramatic necessity of the effects, pictorial or sound, or both to the picture.

Economic necessity to the picture; it should be physically or economically impossible to produce the picture without the effects.

Illusion of actual reality should be accomplished with such skill that the mechanism by which the effect is achieved is not apparent in the final result.

Echols Resigns From Ansco

G. Harrison Echols has resigned as general manager of the Ansco division of General Aniline and Film Corp., position he has held for the past three years.

Announcing the New
BARDWELL & McALISTER
BOOM
LIGHT

Specifications:

Height of standard

—Maximum 8'6";
 minimum 5'3".

Total reach of boom

—Standard extended at 45° angle, 12'9" from floor; standard retracted, 9'6" from floor. Standard to light — 4'3". Horizontal reach — 6 feet. Maximum reach of boom when in balance—extended, 14'3"; retracted, 11 feet.

Focusing

—4° spot to 44° flood.

Lights—Bipost sockets for precision focusing; uses 500 watt T-20 or 750 watt T-24, C-13 filament medium bipost globes; available either in 3200° K for color photography, or type MP for black and white.

Wheels

—Heavy 3-inch rubber tired ball bearing casters for easy, noiseless shifting.

The new Bardwell and McAlister BOOM Light is here. This is the latest addition to the famous B & M line of photographic lighting equipment....all made in Hollywood.

This new Boom Light has been designed to eliminate undesirable features of other types now in use and give improved performance. As an example, the cross arm may be tilted to any angle without adjusting the thumbscrew at the balance point as shown at #2 in the illustration. A thrust bearing with a fibre friction-disc holds the boom motionless in any desired position. The standard does not need to be lowered at any time for this purpose. This feature alone saves hours of valuable time and countless waste motions.

The legs of the standard (see #3) are so designed that other equipment may be stacked close to it.

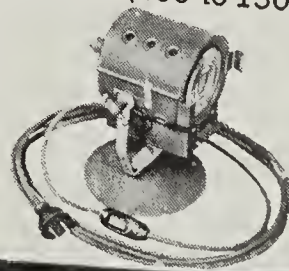
The Baby Keg-Lite with which this boom comes equipped, is also so bracketted (#1) that it maintains a constant angle of adjustment in all positions of the boom up to 45° from vertical.

This and other features listed at left, makes the B & M Boom Light the answer to the demands of the ace cameramen of Hollywood and professional photographers everywhere.

Place your order now for early delivery.

PHOTOGRAPHIC LIGHTING EQUIPMENT

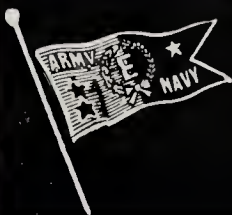
Bardwell & McAlister, Inc., manufactures a complete line of optically correct photographic lighting equipment. Write for free literature on the Senior (5000 watt spot), the Junior (1000-2000), the Baby Keg-Lite (500 to 750 watts) and the Dinky-Inkie (100 to 150) the Single and Double Broads, and Accessories. Address Dept. AC



BARDWELL & McALISTER, Inc.

Designers and Manufacturers

Box 1310 • Hollywood 28 • California



AMONG THE MOVIE CLUBS

Brooklyn Amateur Cine Club

Charles Benjamin has been elected vice president of Brooklyn Amateur Cine club, and Eugene E. Adams secretary—both stepping in to fill vacancies among the officer roster.

Meeting on February 6th at the Hotel Bossert featured one of the club's "gad-get nights." Film program included the first of the Harmon Foundation films, "How To Make Better Movies." Showing was augmented with a discussion by the technical committee on various phases of film making.

Eight millimeter division was featured at meeting on February 20th, with J. F. Hollywood of New York 8 mm. Club, presenting the program of color subjects.

La Casa Club

Regular monthly meeting of La Casa Movie Club of Alhambra, Calif., was held February 18th in Y. M. C. A. auditorium, with John H. Clay as chairman of the evening. Interesting film program included "How to Ski," by John K. Northrop, member of the Los Angeles 8mm. Club, and "Western Canada," a 16mm. subject by C. H. Thomsen. The 16mm. kodachrome documentary, "Eighteenth Century Life in Williamsburg, Virginia"; presented by Eastman Kodak Co., was repeated by request of many members.

New York Eight

Ernie Kremer's "Southern Exposures," and Richard Elms' "Nantucket Turnabout" featured the film program of the January 21st meeting of New York City 8 mm. Club, held at the Hotel Pennsylvania.

Tri-City Cinema Club

Nearly 100 were present at the January 18th meeting of Tri-City (Davenport, Rock Island, Moline) Cinema Club, held in auditorium of Iowa-Illinois Gas and Electric, Rock Island. After a short business session, film program included exhibition of "Flowers" (8mm.), by Marvin Russell of Rock Island, and "Autumn and Spring" (16mm.), by Miss Georgia First of Rock Island. Paul DeGraff, Iowa representative for Ansco, delivered a symposium on movie films, including "processing of black and white film—illustrated with slides; and a description of Ansco Color, which was accompanied by both a reel of 16mm. and slides.

February 22nd meeting was held at the Davenport Municipal Art Gallery, and film program featured "Iowa Trails," by Mr. Lytle.

L. A. Cinema Club

Proposal to change the name of Los Angeles Cinema Club to Hollywood Cinema Club consumed major time of business session of meeting of Feb. 4th held at the Wilshire Ebell Club. Vote on the question resulted in a tie, 60 to 60, of the members present, and it was then moved that mail ballot of all members in good standing be taken. Deadline for the mail voting has been set for March 1st, and outcome will be announced at the March meeting.

In addition to showings of prize winning films in the recent club contest, members viewed series of Kodachrome slides by Dr. E. Leslie Eames.

Sound Projector Demonstrations Set by L.A. Cinema Club

During the next several months, the Los Angeles Cinema Club program committee is arranging to have demonstrations at meetings of the latest models of the post-war 16mm. sound projectors. Idea, advanced by Secretary Jack Shandler, and okayed by the board of directors, is to invite the manufacturers or local distributors of the standard and recognized projectors to demonstrate their machines at monthly club meetings; each projector to hold the stage on a specific meeting night for the running off of two to four reels of sound film.

In this manner, the large number of members interested in purchasing 16mm. sound projectors when the latter are available, will be enabled to obtain a comparative demonstration of each under uniform conditions in the same room. Procedure will also eliminate the loss of time of members in visiting various dealer showrooms for individual demonstrations.

The idea is one which can be easily and readily adopted by other amateur movie clubs throughout the country, especially in those instances where a large number of members are interested in obtaining demonstrations of the new equipment which will be on the market shortly whereby advance reservation orders are not necessary.

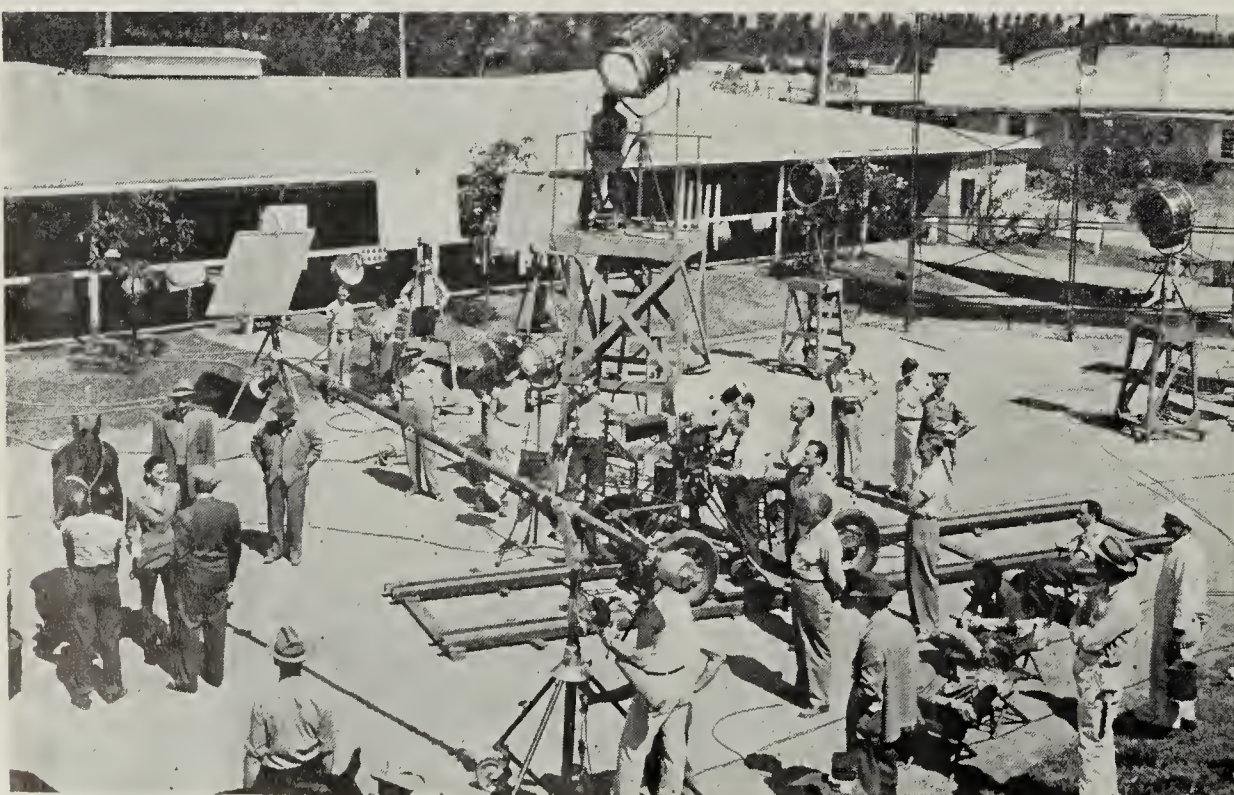
The Los Angeles Cinema Club has already contacted two distributors of standard 16mm. sound projectors, and have received enthusiastic assurances of cooperation in the plan. It is expected the others will be lined up within the next month to participate.

Los Angeles Eight

Los Angeles 8mm. Club held regular meeting on February 12th in the Bell & Howell auditorium, with a talk on "The Technique of Movie Making" headlining the evening, after which several additional entries in the annual contest were exhibited. Club has sent out a special questionnaire to all members, asking for listing of various equipment owned, and for survey of membership interests in the monthly programs.

Public Address System by De Vry

De Vry Corporation of Chicago, has designed and is currently manufacturing four position mixer unit public address systems. With four inputs, four microphones or a record turntable and three mikes may be used.



Interesting exterior camera setup at Hollywood Park racetrack for scene in Metro-Goldwyn-Mayer's "She Went to the Races." In stable area, James Craig and Ava Gardner are ready to make a scene, with Charles Salerno, Jr., A. S. C., handling direction of photography.

Forecast for '46...



**CINÉ-KODAK
MAGAZINE 8**

Three-second loading with interchangeable Kodachrome or Panchromatic film magazines; $f/1.9$ lens interchangeable with six accessory lenses, including a wide-angle lens and ranging out to a five-times telephoto; enclosed direct-view finder serves all lenses; four operating speeds including slow motion; unique footage-indicator control "doubles" as magazine release when changing films; pulsing button for gauging scene length; attached Universal Guide for all Ciné-Kodak Films.



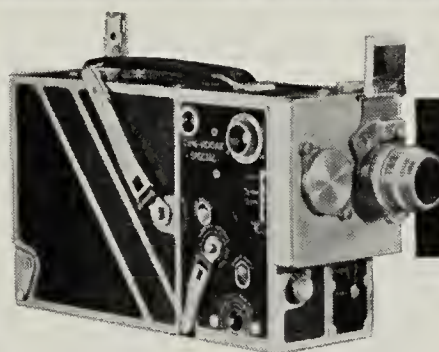
**CINÉ-KODAK
MAGAZINE 16**

Slip-in interchangeable loading with any of four Ciné-Kodak full-color or black-and-white films; $f/1.9$ lens interchangeable with six accessory lenses ranging from a wide-angle to a six-times telephoto; full-vision eye-level finder serves all available lenses; three operating speeds, including slow motion; automatic motor shut-off; pulsing button for judging scene length; magazine footage indicator shows unused film whether magazine is in or out of camera; attached Ciné-Kodak Universal Guide.



**CINÉ-KODAK
EIGHT-25**

Roll loading—takes the same famous Ciné-Kodak Films provided for the "Magazine 8," plus low-cost Ciné-Kodak Eight "Pan" Film; has fixed-focus $f/2.7$ lens; secured winding key; locking position for exposure button so movie maker can get into the picture; full-vision eye-level finder combined with carrying handle; automatic footage indicator; Ciné-Kodak Universal Guide serving all Ciné-Kodak Films; combines all practical economy of equipment and operation with top dependability.



**CINÉ-KODAK
SPECIAL**

The one "amateur standard" movie camera acclaimed by engineers, biologists, physicists, doctors, athletic coaches; makers of industrial, advertising, and training films—and all other advanced workers in 16mm. movies—as adequate for the filming problems they must overcome and for the professional effects they desire. No first camera for the newcomer—yet definitely the ultimate camera for those seeking easy mastery of 16mm. movies at their very best.

Ciné-Kodaks and Kodascopes are on the way

ONLY a very few—right now. Then, more and more in the weeks and months to come . . . economy "Eights" . . . versatile, easy-to-operate Magazine Ciné-Kodaks—both 8mm. and 16mm.—the most popular movie cameras in the world, regardless of price . . . and that finest of all 16mm. cameras, Ciné-Kodak Special. Kodascopes will return by the same schedule . . . 8mm. silent projectors . . . 16mm.

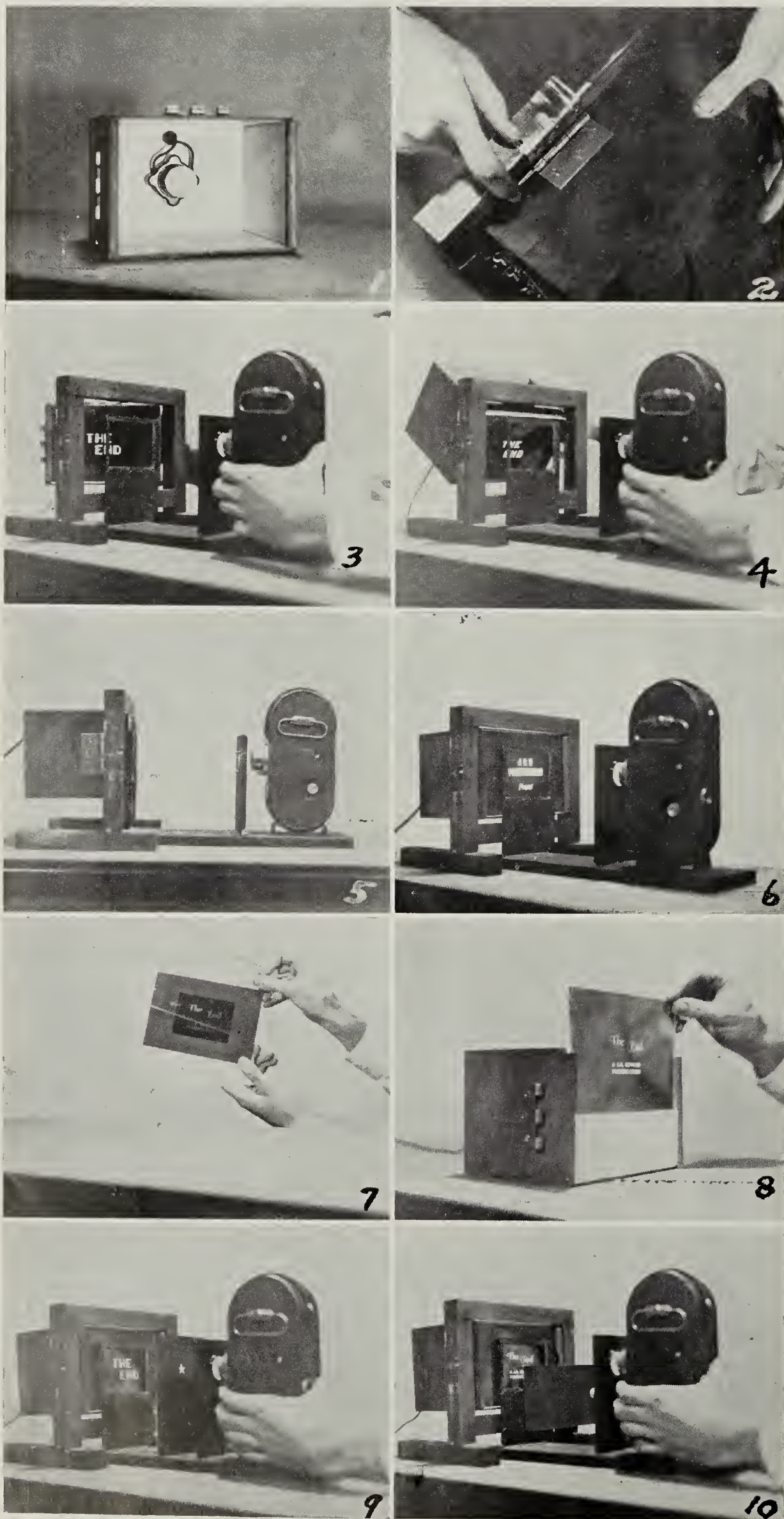
projectors, both silent and sound.

See your Ciné-Kodak dealer—soon—about your future Ciné-Kodak. And while you're there, stock up on Ciné-Kodak Film . . . full-color Kodachrome or brilliant black-and-white. He should have all you want—just in time for your spring movie making . . . Eastman Kodak Company, Rochester 4, N. Y.

Kodak

TITLES OF DISTINCTION

By JAMES R. OSWALD



TITLE making is fast becoming a source of enjoyment for the movie maker that rivals the actual taking of pictures itself. Discriminating amateurs, no longer content with the routine shooting of title cards "straight," are constantly alert to new ways of lifting their titles out of the "ordinary" class. In this connection, much is to be gained by watching closely the innumerable, clever effects of professionally made movies, next time you visit your local theater, with an eye towards incorporating some of these interesting innovations to your own movies.

True enough, one can hardly hope to compete with Hollywood in every respect, with its endless talent, equipment, and resources, but it's surprising what can be done with limited equipment and a creative head!

In spite of the many unique tricks that are used to enhance professionally made titles, one of the most intriguing, in my opinion, is the superimposition, wherein the desired wording appears over an actual motion picture background. Other title styles seem to come and go, but the superimposed version retains its popularity.

As many are already familiar, this requires that the film be double exposed. There are several ways of accomplishing this feat, professionally, including the use of the camera, the motion picture printer, and various applications thereof. Obviously, the novice has but one alternative.

The usual method for the amateur to make these superimpositions is by double exposing the film in the camera. It is customary to expose the background scene, after noting the footage guide, and wind the film back to the starting point of the scene in the darkroom, and then expose the title against a jet black background. It makes little difference whether the background scene or the

(Continued on Page 96)

Illustrated at left: (1) Interior of the light box, showing placing of the lamp socket and lamp. A Rheostat can control the intensity of the 10 watt lamp for perfect fades. (2-3-4) Hinges enable the box to pivot in any one of three directions—for swing-in or out titles—merely by inserting the proper hinge pin, nad removing the two not in use. (5-6) Side views, showing how the apparatus is used in conjunction with the regular title making equipment. (7) The transparent title card, a film negative, is "sandwiched" between two pieces of glass; one preferably an opal glass to diffuse the light. (8) The glass "sandwich" is then placed in grooves at the top of the light box, and slid to the bottom, where it will remain securely in place. (9) Here a star shaped mask has been cut from black paper, and mounted on a stiff card, for outline effects. Masks may be cut in various patterns, and zoomed towards the camera. (10) Wiping a card across the title field in various fashions, with the camera running, gives wipe effects. Your own imagination is the limit.

Now Available for Immediate Delivery!

A Limited Number of

WALL 35MM SOUND CAMERAS

**COMPLETE WITH AMPLIFIERS AND POWER SUPPLIES —
READY TO RECORD SOUND**

PRICES

1 Wall Camera — Single System Sound

CAMERA—Complete\$5,490.00

- 1 Camera Case—Carrying
- 1 Camera Accessory Carrying Case—consisting of 1 matte box
- 1 Magazine belt tightener
- 2 Collapsible film spools
- 4 Bakelite film centers
- 1 1000' and 1 400' magazine loading hooks
- 1 Filter holder container with 9 double and 3 single filter holders
- 1 Oil can
- 1 Pair pliers
- 1 Screwdriver
- 1 Bottle of camera lubricating oil—good for 80 below zero
- 3 Camera belts—small, medium, large
- 1 Camera portable power pack shoulder carrying strap with 6 non-spillable storage batteries and 3 4-volt, 2 6-volt, 1 12-volt outlets

SET OF LENSES—Complete\$1,420.00

- 1 Bausch & Lomb Baltar 50 mm f 2.3 coated lens
- 1 Bausch & Lomb Baltar 75 mm f 2.3 coated lens
- 1 Bausch & Lomb Baltar 100 mm f 2.3 coated lens
- 1 Bausch & Lomb Baltar 152 mm f 2.7 coated lens
- 1 Bausch & Lomb Baltar 35 mm f 2.3 coated lens

SOUND SYSTEM—Complete\$1,853.00

- 1 Modulite Galvanometer
- 1 Amplifier
- 1 Amplifier Carrying Case
- 2 Amplifier Accessory Carrying Cases
- 2 Camera power cables
- 2 50' microphone extension cables
- 2 Galvanometer Cables
- 2 Amplifier power cables
- 2 Sets of Earphones
- 4 Exciter Lamps
- 2 Microphones with cable, gooseneck and baffle
- 2 Microphone tripods
- 1 Vibrator Pack with 6 non-spillable storage batteries

TRIPOD—Complete\$600.00

- 1 Tripod (pan) handle
- 1 Crank handle
- 1 Baby tripod with carrying case and Hi-Hat
- 1 Tripod with freehead and boot and saddle
- 1 Triangle
- 1—Magazine carrying case with 2 1000' magazines\$263.00
- 1—Magazine carrying case with 4 400' magazines\$364.00

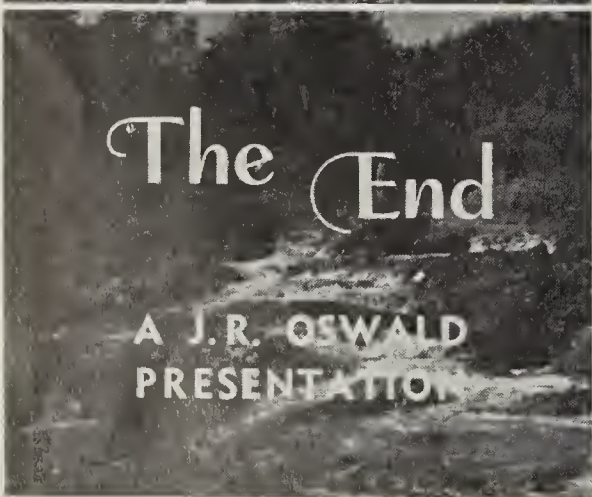
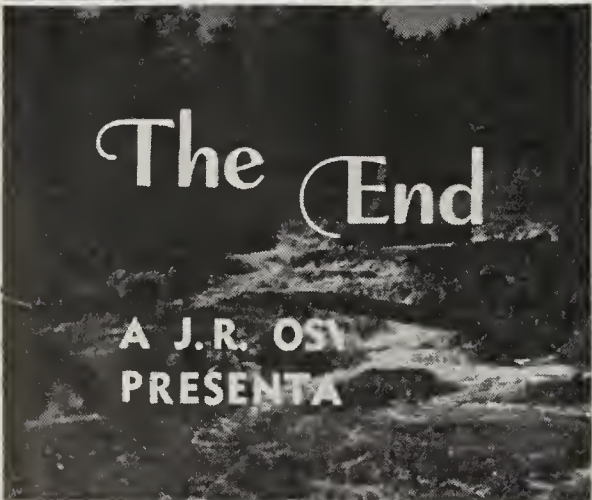
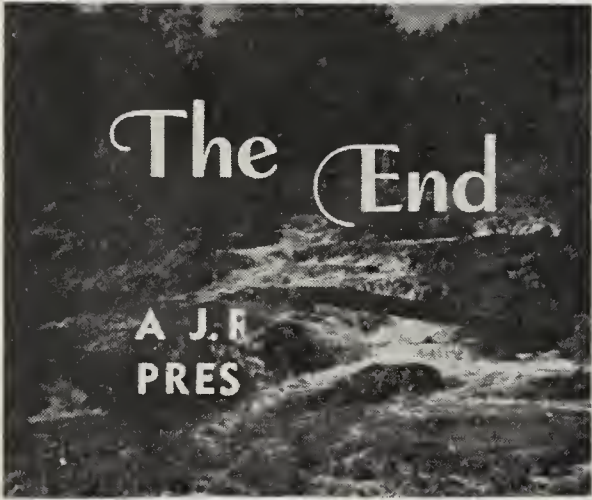
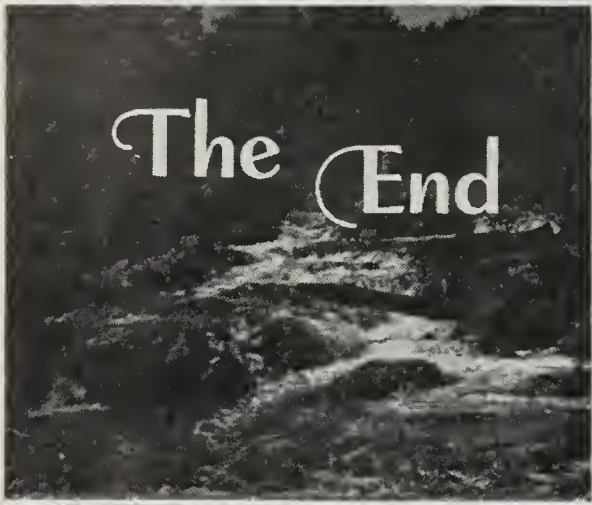
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Wiping a card across the title field in various fashions, with the camera running, gives wipe effects. Your own imagination is the limit.

Titles of Distinction

(Continued from Page 94)

title is exposed first, but it is customary to slightly underexpose the picture part, to make the white letters stand out.

There is one objection to making this type of title in the manner just described, however, and one which has caused me to deviate from the customary practice. It is extremely difficult to light the title card in such a way that only the white letters register on the film, giving the finished product snappy contrast, with clear cut letters against a background in motion. My determination to perfect this type of title, which has always appealed to me was unyielding.

After considerable experimentation, and many disappointments and failures, I set out to find a new way to improve these superimpositions. To this end my efforts were rewarded when, having remembered reading of rear-illuminated titles, I decided to try lighting these titles from the rear.

Using *transparent* title cards, made by photographing the original title card first with a still camera, to obtain a film negative, serves a purpose that is two-fold: First, it provides the required opaque background to the white, *transparent* letters through which the light will shine; second, it enables the free use of black ink in the original design, which is much easier to work with than white.

While basically all that is required in addition to the regular title making apparatus to make these superimpositions is a small lamp bulb, a couple pieces of glass the size of the title field, and a few short lengths of Scotch tape, as a matter of convenience I rigged up the lamphouse part of an old enlarger as a combination lamp holder and title card holder, to which the titles are taped. Although this set-up served the purpose quite well, I saw further possibilities for rear-illuminated titles.

Gradually improving my methods for making superimpositions, the gadget illustrated with this article was designed to give added versatility and ease to the process. The pictures and captions are

self-explanatory, and require no detailed comment in order to grasp the steps involved. Though the outfit was constructed to specifications for use with my own particular camera and title making apparatus, such an accessory could easily be adapted to each individual case.

It should be mentioned that a rheostat can control the intensity of the 10 watt lamp in the light box, for perfect fades, while the hinges enable the box to pivot in any one of three directions, for swing-in or out titles, merely by inserting the proper hinge pin, and removing the two not in use. Similarly, wiping a card across the title field in various fashions, with the camera running, gives wipe effects. Your own imagination is the limit.

Best of all, these superimposed titles are possible with the most inexpensive of home movie cameras. Once you've seen what can be done along these lines with *your own* equipment, you'll be convinced. Possibilities depend upon your own skill and inventiveness. That's why I say, for real *superb* titles, try rear-illumination!

Cinema Club of San Francisco

Regular monthly meeting of Cinema Club of San Francisco was held February 19th at Women's City Club. Vice President Larry Duggan functioned as meeting chairman and arranged a varied film program, including: "Breakfast Is Ready," a comedy in kodachrome by Harry Berman of Westwood Movie Club; "The Bum," by Col. M. T. Lewis; "Trip to the Logging Country," combination kodachrome and black-and-white by Benjamin Nichols; "Ten Pretty Girls," a kodachrome from the film library; and "Fiftieth Anniversary Celebration of Nurses Training School, St. Helena Sanatorium," by Dr. T. J. Lyman.

Leon Gage is arranging a trip to an exclusive and unusual nursery where members may try their cameras on the flowers as subjects. Future meeting programs include showings of new equipment and accessories; demonstrations of the new Ansco color film, and sound-on-wire apparatus.

Byron Opens New 16mm. Laboratory

New 16mm. laboratory, complete in every detail and equipped with the most modern film processing machines and equipment, has been opened by Byron, Inc., in Washington, D. C. Building, separate from the company's complete sound studio for 16mm. production, is the first in a series of post-war expansions planned by the Byron organization.

The new facilities, added space and equipment, will triple the printing capacity of the Byron laboratory, and assure continuance of delivery of full-fidelity black-and-white and color correct prints which has been featured by the firm for several years. And for the first time, Byron offers clients complete black-and-white processing through a

continuous-process developing machine.

Layout was carefully planned for maximum efficiency—temperature is controlled, and all air is filtered to prevent dust damage. Space has been provided for several pieces of latest post-war equipment which is slated for delivery and installation within the next few months.

Byron, which provides studio production and sound facilities in addition to the laboratory, is keeping in step with the tremendous expansion of the use of motion pictures in the commercial and educational fields, and has extensive plans for future expansion in a long-range program.



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HYPAN FILM

THE DIFFUSION DISC

By IRVING BROWNING

There is more behind every motion picture than the layman can imagine or detect. In the old days, technical flaws, jumpy motion, blurred photography, were all taken in the movie fan's stride. Just to be able to see a moving picture was a marvel that far outweighed any criticism of its quality. Today, however, technical perfection is a definite requirement, and picking boners seems to be the objective of some movie fans, but that is all to the good, because it keeps motion picture technical staffs toeing the mark.

Since it is the privilege of the movie fan to seek out our errors and criticize them, it is for us to recognize and acknowledge technical methods that have become obsolete. This article on the Diffusion Disc lays more stress on its demerits than on its merits.

I, myself, have used the disc or its counterpart in the movie camera, still camera, and enlarger, but now it belongs to a long past era of photography. Even though it is not as widely used now as formerly it still appears in close-

ups so often that it seems like a blur in contrast to a sharp film. The point I want to make is, should a diffused sequence be used, regardless of its purpose, which is detrimental to good eyes as well as poor eyes? My feeling is that there is no comparable point between its harm to the eyes and the aid it gives in photographing a difficult subject.

I know all the arguments for and against its use. I appreciate how much artistic effort a cameraman must sacrifice in order to cover up any facial defects in a close-up which make-up alone could not accomplish. I appreciate, too, how important it is for the producer to present his valuable wares in the best light to his buying public.

Much of the fault lies with the movie audiences, who for a long time have put beauty in first place and performance second. For the sake of beauty we have the make-up department on one hand and photography on the other. When these two forces cannot accomplish a re-

sult of beauty by make-up and light, then the Diffusion Disc is brought into play. By disturbing the light rays this blurs up the entire scene to get a diffused, close-up portrait. Thank goodness it appears only in close-ups.

Science has made great progress in developing aids to better vision. The screen also has developed in that direction. The use of a Diffusion Disc is like removing the glasses from one with poor vision, and gives a comparable effect to those with good vision.

I always consult my dictionary for exact definitions, and this time Webster defines "Diffuse" or "Diffusion" as "to pour in different directions—to spread—to scatter." The use of a Diffusing Disc in front of the lens will scatter the light rays—spreading them in different directions or diffusing the view.

In the early 20's the diffused photograph and motion picture came into vogue. The screen, seeking a new approach to art, used this method of diffusion for artistic effect. The Diffusion



Examples of diffusion disc technique popular on film productions in the early '20's. Left, Buster Keaton in "The General"; right, Adolphe Menjou in "Woman of Paris."

Disc imitated the art of painting, and at that time any imitation of an art was better than no art at all.

Edward J. Steichen, the dean of American still photographers, once told me a humorous story in connection with his first experience with diffused ("soft focus," as it was also called) photography.

"Many years ago," he said, "I was on a photographic assignment, making a series of exteriors for a national magazine. In the midst of this it began to rain, and I hurriedly completed the scheduled photographs so that I could finish my assignment. On my return home I developed the films and found that the last negatives I had made during the rain were not sharp, but soft—as if my negatives were out of focus. The lens had become moist from the rain and the result was a "blurred" effect.

"Because I did not relish the idea of going back to do those negatives over again, I printed and delivered them, together with the others, and made no mention or excuse for the "blurred" pictures. I only hoped they would be accepted without comment.

"Some time later the art director of the same periodical telephoned me and I was offered another assignment. I went to his office to receive instructions, and after arrangements were made my client concluded enthusiastically: '... and please—give us that fine art effect which you had in some of the photographs on your last assignment.' With this I left, wondering what to do about the 'fine art effect'!"

When Steichen got on the job, however, he conformed to the usual procedure. He set up his camera, adjusted the lens, shutter, holder; everything was ready. Then, at the last minute, as he put it, he "Spit on the lens." The shutter clicked and, hocuspocus, out comes soft focus pictures—the art of Steichen's photographic masterpieces reproduced again!

Karl Struss many years ago designed the Struss Pictorial lens, a soft focus concoction which he sold by the hundreds for still photography. Later he designed such a lens for movies.

Before the use of the Diffusion Disc many cameramen used crepe-de-chine—that transparent black silk cloth rightfully used for milady's clothes. When it was used in front of the lens one thickness made slight diffusion, and double thickness made heavy diffusion; a small hole burned in the center of the cloth left the center sharp, while the rest of the picture was diffused. As the demand for clear, sharp pictures made itself felt, diffusion gradually disappeared. Now lenses are coated in order to throw off any scattering of light which tends both to diffuse and over-expose highlights.

Diffusion is as hard on the eyes as is out-of-focus film. Many people wear glasses to correct indistinct vision, but the diffused picture again makes the image indistinct to them as well as to the person with good vision.



Another example of the diffusion disc. John Barrymore in a starring production.

Do not confuse my disapproval of diffusion in the close-up as compared to fog scenes, mist, night effects or sequences which may be photographed with a disc or made soft through low key lighting. I am concerned with the diffused scenes which appear like this: Long shot of a room—three people standing, talking. Semi-close-up: same scene. Close-up: over shoulder of male to female—Diffusion Disc used. Close-up of male over female shoulder—scene is sharply photographed. Semi-close-up of male and female—slightly diffused. Close-up of female—heavily diffused. Close-up of male—very sharp. Semi-close-up of male and female—slightly diffused. Close-up of female—heavily diffused, and so on and so on.

Such procedure is hard on the eyes; the effect is like removing glasses from eyes that need them and then replacing them at intervals and continuing the procedure for some time. This is annoying and disconcerting and is the effect which the diffusion creates when used as illustrated above.

In Lewis Jacob's book, "Rise of the American Film," he speaks of diffused photography as highly flattering to women because it softens features and eliminates signs of age. This may be true but it is also true that it is a sacrifice of good photography and detrimental to the eyes.

Recently I was engaged in the production of a film on the rehabilitation of the blind called, "Sight Unseen." This film, as many others I have made on the preservation of eyesight, has made me sight conscious, and that has been my reason for bringing the subject of

diffusion to the fore. I feel quite sure that if the diffusion sequences which I see from time to time were incorporated into one reel and shown to eye specialists, they would agree that it is as detrimental to the eyes as poor light and other harmful factors.

In the cameraman's art nothing compares to a good sharp picture, which is a blessing to the eyes as well as an artistic achievement. With the aid of science we eliminated the projector flicker, we improved our lighting equipment, we developed pancromatic films, the finest coated lenses, the best camera equipment, and excellent color processes. With all these advantages and legitimate elements we should leave the stage of imitation to the past, where it belongs.

What do yuh say, Bud? Wanna buy a Diffusion Disc?

Boom Forecast in Industrial Films

American industries, especially those manufacturing and marketing heavy machinery, are setting up substantial appropriations this year for the production and distribution of 16mm. films to advertise and promote their products abroad. This information is disclosed by Joseph A. Thomas, president of Telefilm Studios of Hollywood. Among companies employing 16mm. films for promotion of heavy machinery are: Cincinnati Milling Machine Co., Jones & Lamson of Springfield, Vt., Allis-Chalmers of Milwaukee, and Caterpillar Tractor Co., Thomas stated.

Monument Valley District in Two Filmosound Releases

The Monument Valley area is featured in two latest releases of Bell & Howell's Filmosound library. Both are in 16 mm. kodachrome. Lt. Jack Breed produced the color-sound one reeler, "Navajo Sand Painting;" while Joe Ott produced "American Antiquities." Latter begins at Mesa Verde, and then swings through the Navajo National Monument, Monument Valley, Rainbow Bridge, and other sections of the district.

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Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, A. S. C. Directors of Photography are assigned to the following feature productions currently shooting in the various Hollywood studios:

Columbia Studios

Joseph Walker, "The Al Jolson story" (Technicolor).

Henry Freulich, "The Devil's Mask," with Anita Louise and Jim Bannon.

Phil Tannura, "One Life Too Many," with Leslie Brooks, George Macready and Forrest Tucker.

International Pictures

Milton Krasner, "The Dark Mirror," starring Olivia de Havilland, Lew Ayres, Thomas Mitchell.

Metro-Goldwyn-Mayer

Charles Rosher, "Fiesta," (Techni-

Filmo Diplomat Again Available

Distribution to photographic dealers of Bell & Howell's postwar movie equipment is progressing smoothly. One of the first items to appear on dealers shelves is the Filmo Diplomat, 16mm. silent motion picture projector.

Designed for the home movie maker, the Diplomat possesses many exclusive Bell & Howell features. These improvements are claimed to add a professional quality to home movie projection.

A new cooling system permits the use of a 100-watt lamp in addition to the standard 500- and 750-watt lamps used previously. The 1000-watt lamp is primarily intended for showing movies in halls, clubs, etc. All lamps are pre-aligned and pre-focused to obtain maximum efficiency of each lamp.

Every moving part is gear driven, even to the feed and take-up spindles. There are no chains or belts, inside or outside. Gears are fully encased and silent.

The Diplomat is constructed to show not only silent film, but sound film as well. Although the sound is not heard, many fine motion pictures formerly restricted to sound-on-film projectors may now be shown on this machine.

Still projection of any single picture is accomplished simply by disengaging the clutch. A perforated, all-metal safety shutter operates automatically to protect the film from heat. A reverse lever is provided for running the film backwards to achieve amusing effects or to repeat a scene.

A Bell & Howell 2-inch F 1.6 lens, which transmits a large volume of light, is standard equipment. However, it may be replaced instantly with any one of a full range of extra lenses to meet special requirements.

Self-lock sprockets, a patented device, make incorrect film threading an impossibility. They also materially lengthen the life of the film by exerting less strain and pull.

color) with Esther Williams and John Carroll.

Harry Stradling, "Till the Clouds Roll By," (Technicolor) with Judy Garland, Robert Walker, Frank Sinatra.

Karl Freund, "You Were There," starring Katharine Hepburn and Robert Taylor.

Robert Planck, "The Show-Off," with Red Skelton, Marian Maxwell, Marjorie Main.

Charles Schoenbaum, second unit, "Gentleman's Gentleman," (Technicolor).

Paramount

Russell Metty, "The Perfect Marriage," (Hal Wallis Prod.) with Loretta Young, David Niven, Nona Griffith, Virginia Field.

Lionel Lindon, "O. S. S.," with Alan Ladd, Geraldine Fitzgerald, Patric Knowles.

Ben Kline, "Danger Street," (Pine-Thomas Prods.) with Jane Withers, Robert Lowery, Bill Edwards.

Daniel Fapp, "Suddenly It's Spring," starring Fred MacMurray and Paulette Goddard.

Ray Rennahan, "Perils of Pauline," (Technicolor) starring Betty Hutton with John Lund, William Demarest, Billy De Wolfe, Constance Collier.

PRC

Jack Greenhalgh, "Avalanche," (Imperial Films) with Bruce Cabot and Roscoe Karns.

RKO Studios

Leo Tover, "Desirable Woman," with Joan Bennett, Robert Ryan, Charles Bickford, Virginia Huston.

Roy Hunt, "A Likely Story," with Bill Williams, Barbara Hale.

George Barnes, "Sinbad the Sailor," (Technicolor), with Douglas Fairbanks, Jr., Maureen O'Hara, Walter Slezak.

Jack McKenzie, "Child of Divorce," with Sharyn Moffett, Regis Toomey, Madge Meredith, Walter Reed.

Republic Studios

John Alton, "The Ghost Goes Wild," with James Ellison, Anne Gwynne, Ruth Donnelly, Edward Everett Horton.

Henry Sharp, "The Fabulous Suzanne," (Steve Sekely Prod.) with Barbara Britton, Rudy Vallee, Bill Henry, Otto Kruger, Veda Ann Borg.

20th Century-Fox

Ernest Palmer, "Three Little Girls in Blue," (Technicolor) with June Haver, Vivian Blaine, George Montgomery, Frank Latimore.

Charles Clarke, "Margie," (Technicolor), with Jeanne Crain, Alan Young, Glenn Langan, Lynn Bari, Hatty McDaniell, Esther Dale.

Joseph LeShelle, "Claudia and David," with Dorothy McGuire, Robert Young, John Sutton, Rose Hobart, Gail Patrick, Harry Davenport.

(Continued on Page 106)

LABORATORY

Positive View Finder For Cameras

(Continued from Page 84)

Magnification is produced as the variator barrel is moved toward the rear stationary lens. What happens here, of course, is that the combined focal length of the front stationary lens and the front variator lens increase because the spacing between these two lenses becomes wider. Simultaneously the rear variator lens begins to combine its power with that of the rear stationary lens. Fig. 2 (b) shows what takes place here. By moving the variator barrel, the focal length of the combined front stationary lens and front variator lens becomes longer, while the focal length of the combined rear variator lens and rear stationary lens shortens as the spacing between them decreases. Thus, the change from a reduced image to an enlarged one occurs when the combined focal length of the front optical elements become greater than the combined focal length of the rear elements.

The largest magnification is produced by the vari-focal system when, in the extreme rear position, the image formed by the front stationary lens falls into the front variator lens. In this position the vari-focal system covers only a small field angle and therefore corresponds to a telephoto lens. (See Fig. 2 (c).)

Two serious disadvantages to the vari-focal system as a complete view-finder when used alone have been overcome in the new positive view-finder. It has been noted, of course, that the objective lens combination produces an inverted image, an objectionable feature in a view-finder. A more serious defect of the "variator" system lies in the fact that the image moves in opposite direction to the movement of the "variator" barrel from the inside of the rear "variator lens" to the inside of the front "variator" lens. So in spite of being a real image, it cannot be framed.

Combined with the vari-focal system to overcome these disadvantages is an erector system. Fig. 3 is a diagrammatic representation of the view-finder. The dotted line separates the vari-focal mechanism from the erector system. This erector system acts practically as a second telescope which collimates the image through the combination of the variator and the stationary lens.

This new image is not only upright as the name erector system implies, but it remains practically stationary within the erector system, because the optical elements of this second telescope do not change. Therefore, a frame can be placed at the image point which corresponds to the size of the film frame and which shows accurately the image which will be produced by the corresponding camera lens.

A cross section through the actual view-finder, illustrated in Fig. 4, shows how the optical elements are arranged.

Filming Rockets

(Continued from Page 88)

Allen Thompson, A. S. C., who was originally with the unit and transferred after two years of service and chief photographers' mate Harold Filan.

Results accomplished, Commander Gilks discloses, were only possible through efficiency, skill, and daring of these and other members of his unit—always working under the most hazardous conditions.

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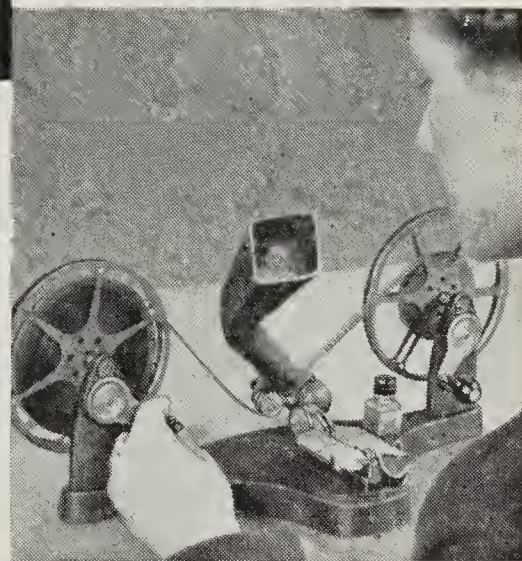
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The Fluid Camera

(Continued from Page 82)

as a *tracking shot* in which the camera actually follows right along with the subject in his course of action.

In this type of shot the camera's motivation for movement is usually pretty well established, since it depends upon and is keyed to the movement of one of the players. The effect to be desired, as in all types of camera movement, is *smoothness*—since a jerky pattern of movement would detract more from the scene than it would add. If the camera glides smoothly along, the audience will not be consciously aware of the movement in itself.

Another type of moving camera shot is the *pull-back*, in which the scene opens with a close-up, the camera later pulling back to present a much wider angle of the scene. This device is used where it is first necessary to focus the audience's attention on a certain small detail of the scene, later broadening the angle to show the context in which that detail is mounted.

In the film, "The Lost Weekend," photographed with superb realism by John Seitz, A.S.C., there was one memorable scene of this type that opened with a striking *super* close-up of the main character's eye as it fluttered open, bloodshot and bleary, the eye of a drunkard. The camera then pulled back to a medium long shot of the character as he awakened from his stupor and began to stumble about the room. In this shot, the close-up of the eye was the keynote of the scene. It set the psychological mood; it focussed the audience's attention by filling the screen with a small but vital detail of the character's state of being. The initial impression created by that close-up carried over to the remainder of the scene and influenced the audience's reception of what followed.

A corollary to this type of shot is a device in which the camera first shows a long shot of the scene and then pushes in to a close shot of a certain segment of the action. This is a widely used type of camera movement and has the effect of first orienting the audience as to locale,

action, and period, before moving in to treat dramatically a smaller part of the overall scene.

A variation of this technique is the *zoom* shot, in which for dramatic effect the camera first shows a relatively wide angle of the scene, then rapidly pushes or *zooms* in to a close-up of a specific detail of the scene. The *zoom* shot, when correctly used, is a dynamic way to focus audience attention on a dramatically important facet of the scene.

Except in a travelogue, it is not considered effective technique to *pan* a static object—although many film-makers have done so in an effort to force action into an otherwise dead scene. At best this is a forced technique and should be avoided except where inserted for special effect. Mere movement of the camera can never compensate for a lack of action within the scene.

Occasionally in a photoplay, the camera—in its role of all-seeing eye—becomes a wandering reporter, browsing here and there to pick up bits of action and characterization, then moving on to select other facets of the situation, the sum total of which adds up to the creation of considerable atmosphere. A notable example of this technique was used in the film, "Casablanca," photographed by Arthur Edeson, A.S.C. In the sequence establishing the interior of "Rick's Cafe Americain" (main locale of the story), the camera picked its way through the crowds, stopping at various tables just long enough to pick up scraps of color and atmosphere, then moving on. It moved exactly as a casual observer might move if he were threading his way through the maze of tables, catching a glimpse of this person or that and overhearing an occasional shred of conversation. The effect in the film was to set the unusual mood of this exotic locale, to identify the types and characters involved in the story, and to prepare the audience for the action that was to follow.

In studio parlance, whenever the camera moves and comes to rest on a new composition, the maneuver is known as a *camera stop*. Certain scenes, especially in musical extravaganzas, involve a great many camera stops. In fact, when this type of film was first becoming popular certain directors and cameramen (as a matter of professional achievement) used to vie with one another to see how many camera stops they could get into one continuous scene. Actually, if well done, this type of scene is more effective than a series of cuts in portraying a musical number, but when camera movement becomes an end in itself, the result is bound to be clumsy and without meaning.

One otherwise competent director of musicals and light comedies used to insist that the camera be moving in every scene. He would have the camera pushing in, pulling back, zooming down from the sky or up from the ground, whether the scene required camera movement or not. In one film this particular director

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shot—a film containing well over 300 scenes—there was only *one* scene that was absolutely a static shot. Audiences left the theatre after viewing this film complaining of headaches from being “whirled around so much.”

At the other extreme was an equally competent director of dramatic themes who insisted that the camera should *never* be moved. His compositions on the screen were particularly forceful and artistic, but he was reluctant to move the camera for fear his careful composition would be destroyed. As a result, his action within the frame was stilted, inhibited, held back. You could almost sense his players watching for the chalk marks on the set floor so that they would not step outside the bounds of the static frame. In one drama that this director shot—a film crammed full of artistic and static compositions—there was only one short *follow shot*. The result on the screen was a static drama.

Obviously, intelligent camera movement is the result of close, careful pre-planning between the director and cameraman. The director, in his interpretation of the author's screenplay, plans his action and consults with the cinematographer as to how that action can most effectively be portrayed on the screen. Often it is found that a series of consecutive compositions can be embodied in one scene and connected by well-motivated camera movement. The resulting scene (which otherwise would have been staged as a series of short choppy scenes) becomes a *fluid* continuity of changing compositions that move smoothly, one into the other.

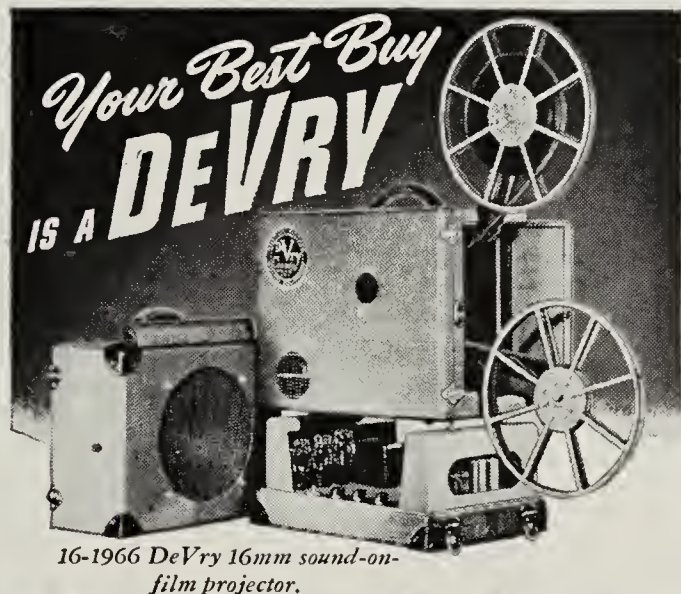
Arthur Miller, A.S.C., who has photographed such cinematic masterpieces as: “How Green Was My Valley” and “Song of Bernadette,” is a cinematographer who uses the *fluid* camera to best advantage. His camera, never self-conscious, glides in and out of the scene searching and selecting those elements which are important to the film narrative.

Joseph Ruttenberg, A.S.C., has demonstrated in films such as: “Gaslight” and “Valley of Decision,” that a smoothly moving camera is a forceful complement to well-staged action. Coupled with a mellow lighting style, his *fluid* technique of camera movement—always original, but never obtrusive—gives depth and perspective to the action as designed by the director.

Joseph LaShelle, A.S.C., winner of last year's Academy award in black and white cinematography for his crisp, forceful lensing of the film, “Laura,” is a cinematographer who excels in the intelligent application of *fluid* camera movement to action on the screen. He has a particular genius for breaking a scene down into various forceful compositions and joining these different “points of view” together through smooth camera movement. Some of the things his camera does seem incredible when analyzed, but on the screen a close-up gives way to a long shot which then evolves

into a *follow* shot, without the audience being aware of the actual camera movement. Mr. LaShelle combines his incisive understanding of the *fluid* camera with a graphic, forceful style of lighting which is at the same time artistic and dynamic, as evidenced in such films as: “Hangover Square” and “Fallen Angel.” The *fluid* camera is a device that be-

longs peculiarly to the photoplay. It has the quality of action that is essential if motion pictures are to be truly “moving” pictures. Skillfully used, camera movement gives the motion picture unlimited scope to select and present on the screen the various elements of the story in dramatic and forceful relationship to one another.

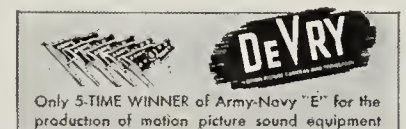


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Aces of the Camera

(Continued from Page 86)

townsmen was a series of stereopticon slides showing the devastation that followed the earthquake and fire that had ripped San Francisco in the preceding April. It was a successful venture, financially speaking, but Paul felt a certain chagrin in the fact that his pictures still failed to move.

Then he heard that in the neighboring town of Tuscola there was a "black-top" showing the most astounding motion pic-

ture of all time, "The Great Train Robbery"; 1000 feet of action packed drama. Paul had to see it. And having seen it he had to see the manager who, probably to save himself a lot of trouble, gave him the job of projectionist.

When the family moved to California later that year Paul was supposed to continue his studies at U.S.C., but so badly had he been bitten by the movie bug that, to keep peace in the family, his father bought a movie house in Sawtelle so that Paul could be a projectionist. That should have taken care of everything, but it didn't. Paul decided that he not only wanted to show motion pictures, he wanted to make them.

The first thing he needed, obviously, was a motion-picture camera. So he decided to make one. He was handicapped by the fact that he had never seen a motion picture camera, but armed with an Eberhardt-Schneider catalogue and the innards of an old Melies projector he set to work. Slowly, very slowly and painstakingly the pieces were fitted into place and enclosed in a plywood box of enormous dimensions. On the front was mounted an old Darbot f. 4.5 lens from a still camera, and, because he still had vivid memories of "The Great Train Robbery", and "The Counterfeiters", and believed that films were all made on the same piece of film and in sequence, there was another box on top to hold a thousand feet of film.

It was a crude and unwieldy affair, but it worked. With it he shot news subjects which were sold to the old Gaumont News. The fire at Venice Pier constituted his first sale, but the check that came in payment for the footage was only a symbol; the satisfaction was in the realization of an ambition.

Then in 1912, Paul became a charter member, number 36, of Local 150, Los Angeles. He worked as projectionist at the Edison; the Clune, at 5th and Main Streets, and was also the instructor at Clune's school of projection which that early day showman had on the second floor of his exchange at 9th and Main. Paul was well established in his profession. Everything looked rosy. And then his fiancée, the girl he subsequently married, moved with her family to San Diego.

To those who have been in love it will be no news that Paul went to San Diego. While he was wandering around down there he found a movie house that had

been closed. Inquiry disclosed the fact that it was in the hands of the bank, and so Paul went to see that institution. He told the banker that he was a projectionist and that he was sure he would be able to make a go of the house if only they would let him open it. The banker thought it was a good idea, too, and told Paul that he could have the place for a rental of \$50.00 a month. And Paul agreed that would be a very reasonable rental. The only trouble was he had 50 cents, not 50 dollars. And then there was another matter, the banker explained; there was no projector. That did complicate matters. But only for a moment. Paul had made up his mind. He told the man he was sure he could get a projector from T. L. Tally the big theater owner in Los Angeles; and the man was apparently so encouraged by such zeal that he agreed, if Paul could get a projector, to let him have the first month's rent on the cuff.

Financed by a five-dollar bill borrowed from his future mother-in-law Paul returned to Los Angeles. Mr. Tally came through with the projector and even allowed Paul credit on his first week's film rental. Everything had worked out perfectly. Until they went to plug in the projector. There was no juice.

The banker was sympathetic when Paul explained his new difficulty, but he insisted that he had made it perfectly clear that there was no electricity hooked up. "But we can't quit now," Paul protested. "I guess you're right," agreed the banker. "I'll put up the money for the installation out of my own pocket."

The theater was a great success, and soon became one of three that Paul owned and operated in San Diego. One of these three houses he equipped for sound in 1913, using the Edison Camera-phone system. In the other two houses he had sound-effects men, working with paraphernalia similar to that used by sound-effects men in radio today, concealed behind the screen.

It is interesting to recall that the Edison Cameraphone Sound System consisted of two cylinder phonographs that played behind the screen. In order to maintain some degree of synchronization it was necessary for the projectionist to crank faster or slower as the occasion demanded. Each record ran for a quarter of a reel at which point the phonograph operator would have to switch to the other machine. The subjects made with sound were mostly scenes from vaudeville acts.

During this period Paul built a studio out in the Mission Hills district of San Diego; and with a Pathe camera, and later with a Gaumont 'beater type' camera, made comedies. His cast was com-

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posed of the members of a stock company playing at the Savoy Theatre at the time, and his developing was done by one Roy Jones who had the local Kodak finishing lab. Paul made the prints in his camera.

When Paul returned to Hollywood in 1915 it was to work for Thomas H. Ince, in the studios located at what was then Inceville; a site now marked by the junction of Sunset Blvd. and Roosevelt Highway. When Irvin V. Willat, who was in charge of the camera department for Ince, interviewed him, Paul pleaded complete ignorance of motion picture cameras for fear that Willat would give him as his first assignment something too tough for him to handle. So he landed in the title department. But not for long. Willat discovered that Paul knew more than he had professed and moved him into the trick department where he taught him the tricks that are the basis of the special effects work he does today.

There were hardy pioneers among Paul's associates at Inceville. Bobby Newhart, Clyde De Vinna, Chet Lyons, Chic MacGill and Dev Jennings were among those who trained their cameras on such stars as Dorothy Dalton, Enid Bennett, Bessie Barriscale, Howard Hickman, Bill Hart and Charles Ray, who were directed by such men as Scott Sydney, Raymond West and Dick Stanton. A distinguished company that blazed a clear trail; fast company for a neophyte cameraman.

In the trick department, working with an artist by the name of Irving Martin, Paul made what may have been the first matte shot ever used in production. It was used in a picture entitled "Peggy", starring Billie Burke.

Then he was given the job of production cameraman on "The Pinch Hitter", Charles Ray's first starring vehicle and Victor Schertzing's first directorial assignment. The trio were a success, and Paul remained as Charles Ray's cameraman through his next seven pictures which included "The Egg-Crate Wallop", the picture that made Ray famous.

Paul remained with Ince for nearly ten years, moving with that company from Inceville to what is now M.G.M. in Culver City, then to the old Biograph lot at Georgia and Girard Streets—a place that is now a street-car barn—then back to Culver City to what is now the R.K.O.-Pathe lot. It was on the last

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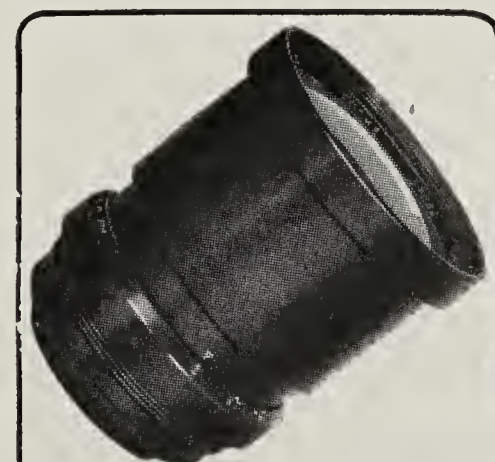
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Aces of the Camera

(Continued from Preceding Page)

named that he was put in charge of the camera and the trick department. And there he developed the first gimbel tripod, a device to simulate the rolling of the ocean and a boon to cameramen with a weakness for mal-de-mer.

It was here, too, that he built the first stage exclusively for trick work and on which he made his first process shot in 1923. This shot was made for a picture entitled, "Sahara", starring Louise Glaum; and a brief recounting of the difficulties involved provide a good yardstick to measure the technical progress made to date.

The screen was a piece of white silk 6 ft. x 8 ft. and had to be woven to order in New York. There were no high-intensity arcs, no fast film and no fast lenses. And because no one had ever thought of synchronous motors at that time the actors had to try to make like love while straddling an 80-ft. drive shaft that connected the camera to the projector. As a 'first' it was a notable achievement, but the limitations were so severe that the system had to be abandoned for all practical purposes.

Sam Goldwyn borrowed him from Ince and sent him to Italy on "Ben Hur". When he returned he found that the studio had become M.G.M. and he carried on under that banner until 1933, when he went with Goldwyn.

Ince also lent Paul to Doug Fairbanks when that worthy was making "Robin Hood", a picture famous in its day for the high standards of its special effects. Paul stayed on to do "Tess of the Storm Country".

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Universal Studios

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Paul Ivano, "Little Miss Big," with Fay Holden, Beverly Simmons.

Warner Brothers

Ernest Haller, "Humoresque," starring Joan Crawford and John Garfield, with Oscar Levant, Ruth Nelson, J. Carroll Naish.

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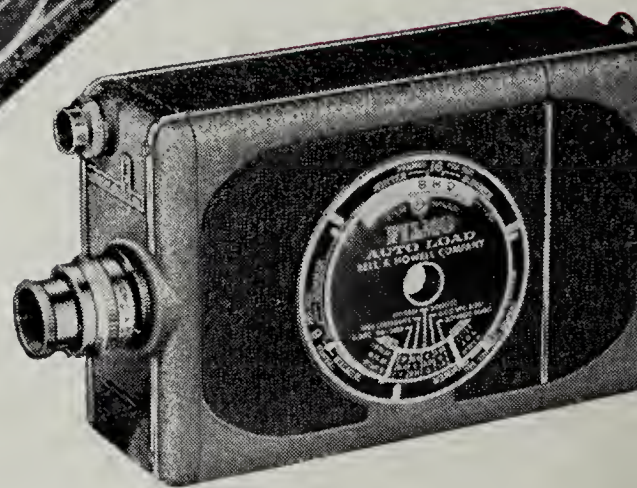
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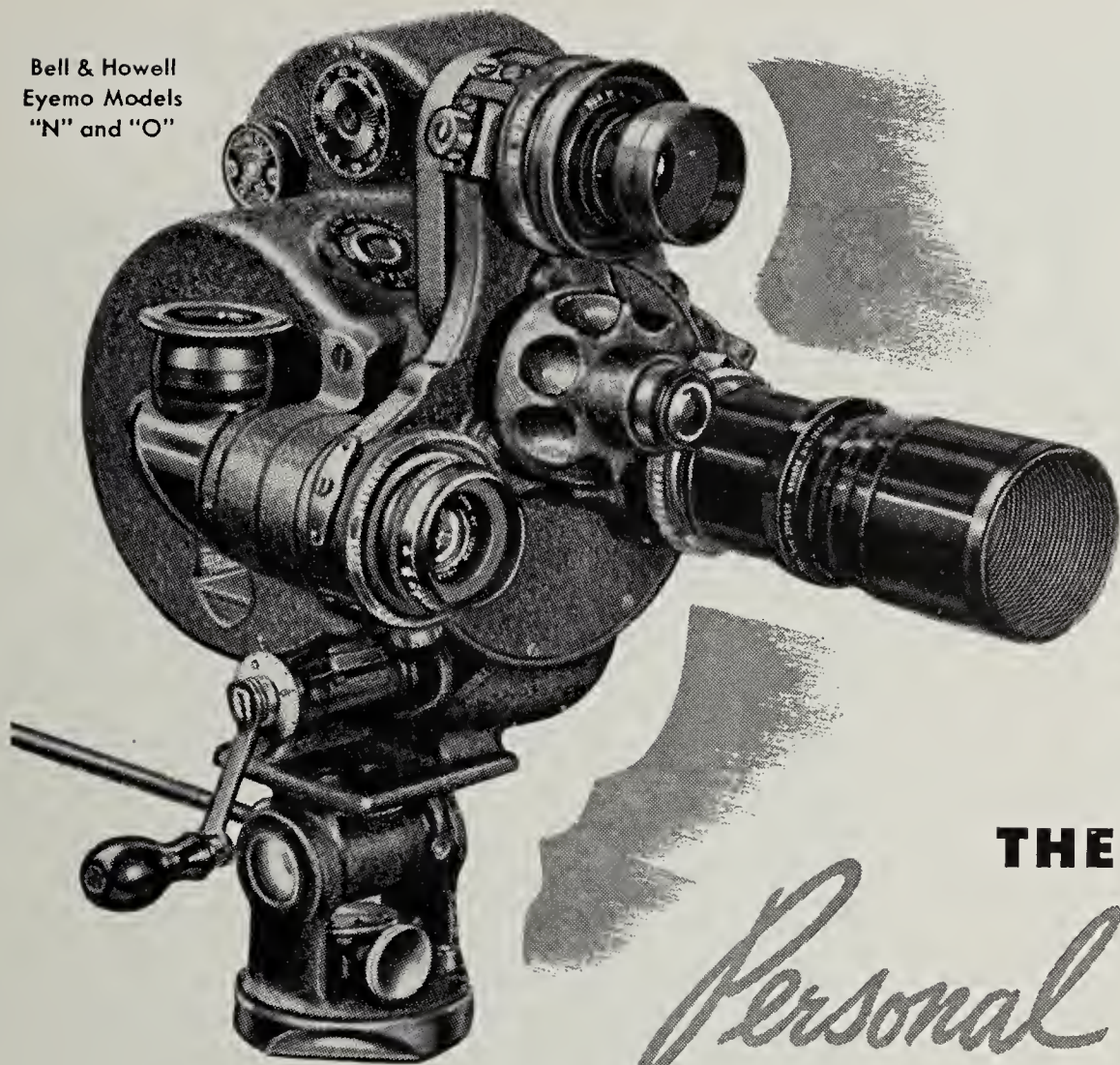


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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

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ON THE FRONT COVER Director of Photography Ernest Palmer, A.S.C. checks final light readings for scene in the 20th Century-Fox Technicolor production, "Three Little Girls in Blue." Director Bruce Humberstone is seated at top right, behind the camera. Principals getting Palmer's attention are: (left to right) Frank Latimore, George Montgomery, Charles Smith; (seated in roller chair) Vivian Blaine, June Haver and Vera Ellen.



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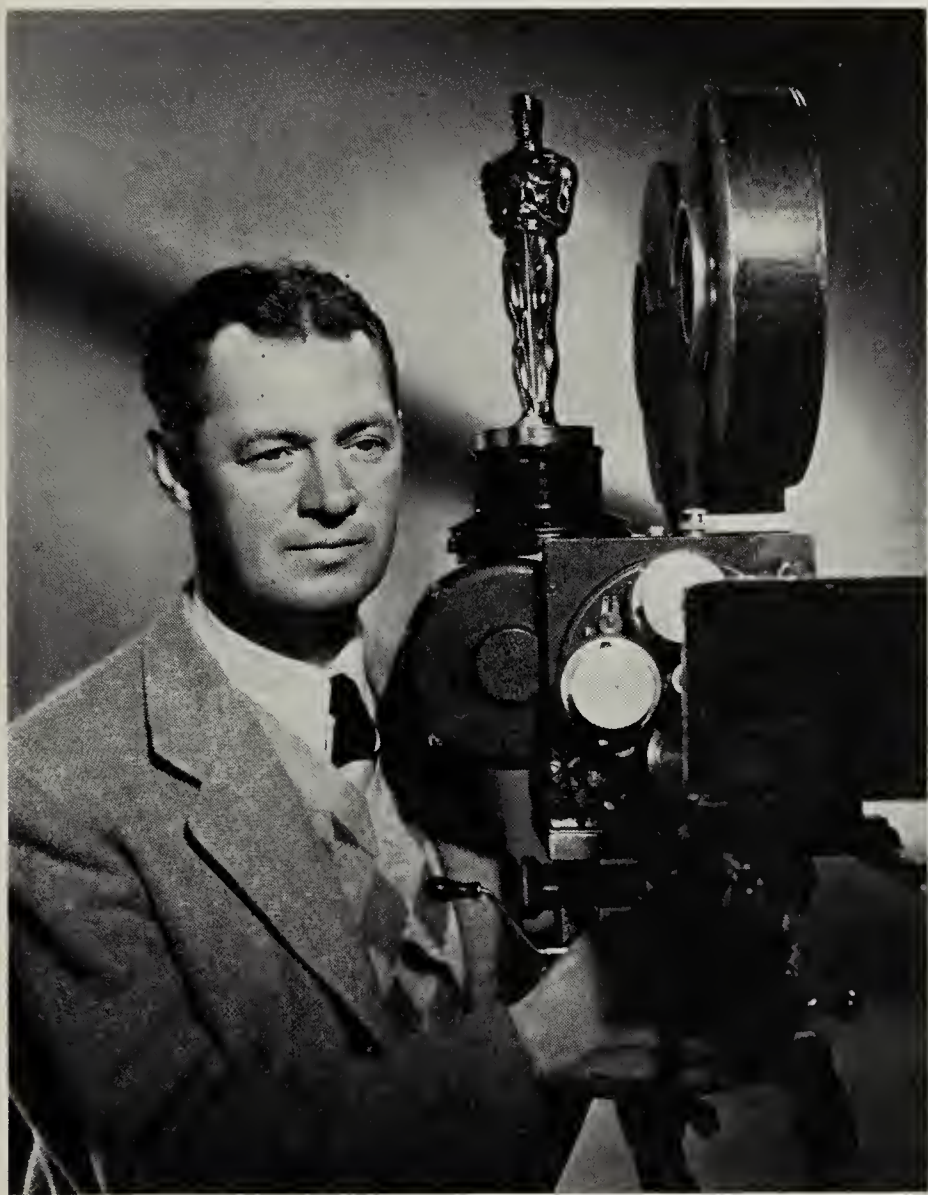
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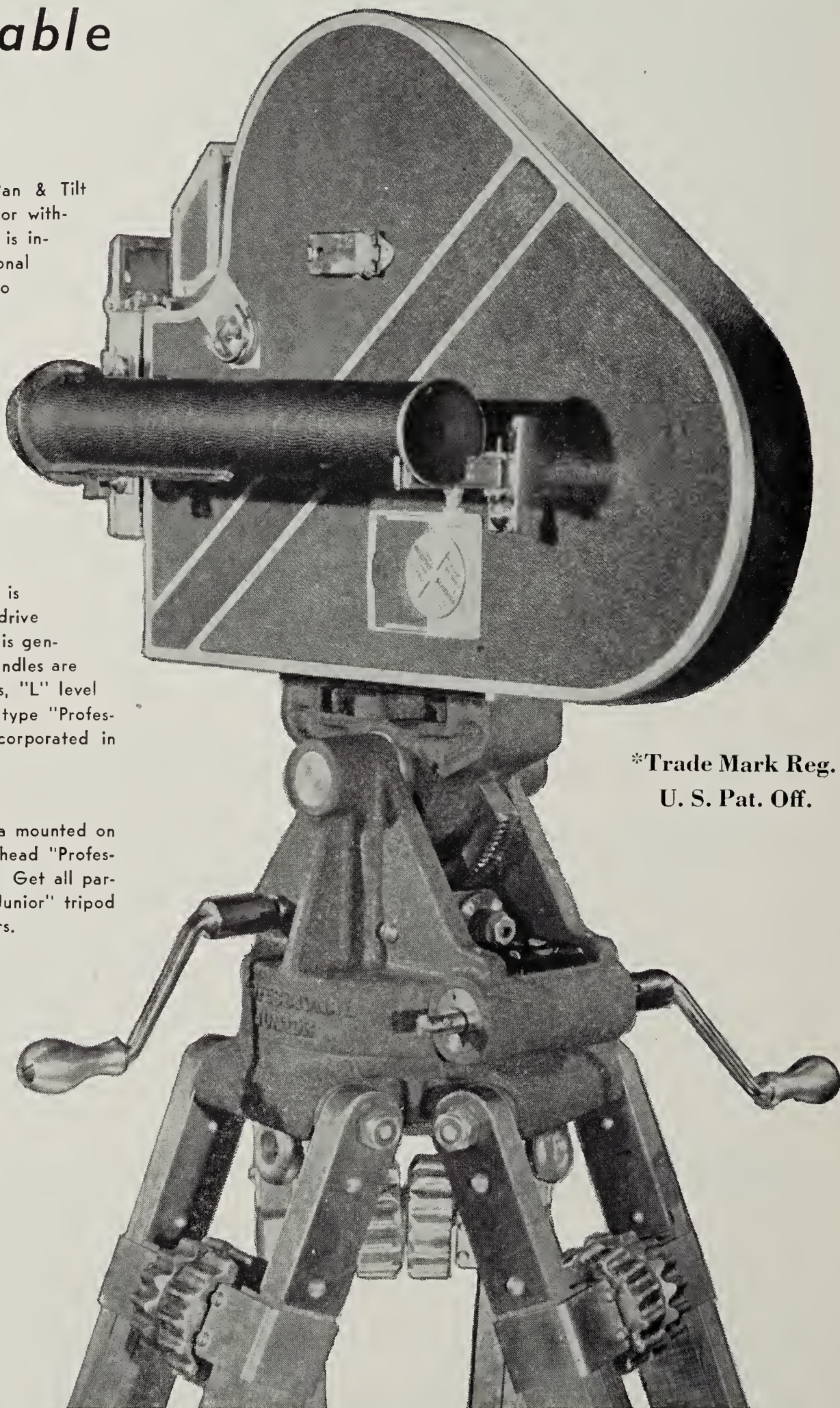
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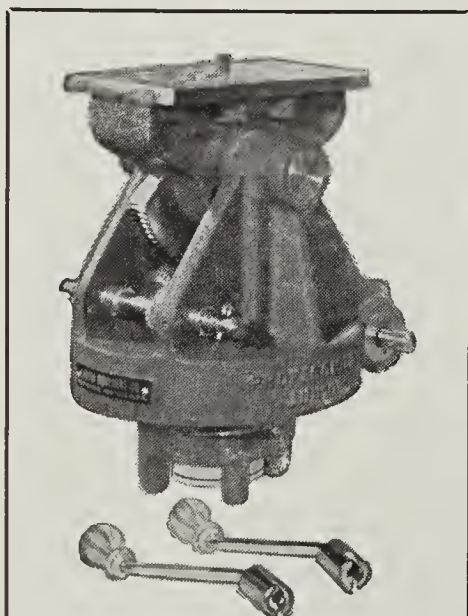
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FRANK C. ZUCKER
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IF you were to sit down to talk with Jerry Ash, about anything, the conversation would most probably take an eventual turn toward the subject of magic. The magic of special effects, of course, but more particularly the magic of those great stage illusionists of the past and present: among them Keller, Thurston, Blackstone, Houdini, yes, and J. Herman Ash; who also practised the deceiving arts under the impressive name of "Palladinero"; a name with great mystic significance for those with a small knowledge of Spanish.

When Jerry does let himself go, and talks about magic and magicians, you come under his spell no matter how practical minded and cynical you might think you are about such things. Perhaps that's one of his tricks. But if, on the other hand, you admit to a feeling of fascination for the subject—you're a dead duck. You'll come away light-headed, not as willing as before to believe all you see, and when you take out your handkerchief you will do so furtively in case it turns out to be a couple of rabbits instead. So, if this article smacks more of illusions and ectoplasm than of cameras and photography we ask your indulgence. Perhaps the spell will break when we get that poultice of ambergis, stinkweed and chicken-fat. Or a hair from the dog that bit us.

The first sight the public got of Jerry, professionally, was when at the age of nine he appeared in a musical extravaganza; not as a magician, but as one of the "Brownies in Fairyland"; a colorful show with an all juvenile cast, patterned after the great English pantomimes. Among the other brownies in the cast who were to subsequently achieve fame in the motion picture industry were Walter Catlett, Hobart Cavanaugh, Florence Gardner, Ernie Adams and Ruth Roland.

"Brownies in Fairyland" toured the major cities in the country for more than a year and was pronounced a great success. But Jerry was not happy as a Brownie. He had been bitten by the magic bug, an ambitious bacillus from whose bite few, if any, recover. Perhaps he was bitten by his uncle, "The Great Albin", whose feats of legerdemain held audiences spellbound in his day. But in any case he was bitten.

After several more years of playing juveniles and assiduously practising the art of magic between shows, Jerry became a professional magician in the field of psychic phenomena; known in the trade as a "spook act."

At first the act could be packed into a suitcase, but as the fame of our mental illusionist grew his act grew with it until he had the props for a two-hour show. And despite the fact that, in the parlance of the trade he remained a "coastguard", i.e., his act never left the coast, his fame spread beyond the sea. Sir Arthur Conan Doyle proclaimed him the "greatest medium he had ever met." William T. Stead, another famous seeker



ACES of the CAMERA

JEROME (JERRY) ASH, A.S.C.

By W. G. C. BOSCO

after the psychic, was equally flattering in his remarks.

The particular illusion and piece of apparatus that brought forth such encomiums was, and is, a camera Jerry invented for the photographing of "spirit images." With this camera, and the opportunity for proper preparation, Jerry can photograph any scene or object and

be sure that a spirit image of the departed soul sought by the subject will appear on the developed negative. And while there are many who can accomplish results of a similar nature there are none who can do so while permitting the subject so much control of the act. Jerry lets the subject examine the cam-

(Continued on Page 150)

INTERNATIONAL STYLES IN CINEMATOGRAPHY

By HERB A. LIGHTMAN

WITH the gradual readjustment of the world to its peacetime tempo, we are at last beginning to see the resumption of normal film production in a number of foreign countries which, during the war, were forced to cease or curtail their motion picture activity. The first fruits of this new effort are just now beginning to reach our screens.

We have in this country a comparatively small but select audience which has always shown great interest toward the cinematic product that foreign studios have in the past sent to these shores. Aside from the entertainment value of these pictures—and more from the viewpoint of the film technician—it is interesting to note how the innate character of each nation and its people is reflected in the approach which the studios in different countries use in presenting photoplays on the screen.

Here we are not concerned with the qualities of the physical materials involved in filming: the sets, the lights, by shortages and budget requirements the film emulsions, the types of chem-

icals used in processing the film, etc. The quality of these elements, especially at the present time, is greatly restricted—so it is not fair to analyze foreign films on this basis. Rather, when we speak of the *approach* various countries have to the cinema, we really mean the *style* and *imagination* with which each nation utilizes the physical tools of the cinematic trade.

Here in America, for instance, we have come to expect certain styles of camerawork which, while varying with the approach of individual cinematographers, still have in common a quality which is definitely *American*. Hollywood technicians have developed the art of the camera, not only with an eye to technical achievement, but also with consideration for the psychology of the audience for which their pictures are made. Americans like the clean-cut, direct approach to a subject—no frills, no deep symbolism, no extreme styles. That is why the camerawork in our films is crisp, well-lighted, fluid, and uncomplicated. That is why our cinematographers shy away from heavy dif-

fusion, startling angles, weird lighting, and complicated compositions.

But just as our audience has its preferences, theatregoers in other countries react favorably to other, more stylized camera treatments. So unusual do some of these techniques seem to the average American, that he often fails to grasp the point that is being presented. And yet, the screen is the closest thing we have to an international language. Let us analyze the cinematic styles of some of these other countries to see how they differ from our own.

Great Britain

British filmmakers—with their practical flair for stripping a situation of its superfluities—have in past years developed a style of documentary camerawork that is dynamic and most realistic. Up until very recently, photoplays with a documentary approach—films such as: "The Invaders" and "One of Our Aircraft Is Missing"—represented the best that Britain offered on the screen. British photography, like all other phases of production, was down-to-earth, restrained, often blunt and unvarnished. The lighting was either very flat, or over-contrasty in simulation of source illumination. The "Illusion of Reality" was striking. But when this same approach was used in films of less documentary content, something was obviously wrong. The cold, incisive newsreel quality of the camerawork did not complement these more sophisticated themes.

Consequently, the British film industry found it necessary to change artistic tactics. Spurred on by J. Arthur Rank, Britain's foremost film entrepreneur, the industry began to develop a more mellow, more *glossy* technique of filming fictional themes. One of the first films to reflect this trend was a spy-thriller called: "Candlelight in Algeria". It was quite obviously slanted for the American audience—and it had many cinematic values, both in the way of direction and camerawork, that we have come to look upon as typically *American*.

Since then, British films have continued to develop increasing amounts of cinematic finish. The studios at Denham, Pinewood, and Elstree have turned out some smoothly tailored bits of screen fare. They have discovered the magic of fluid camera movement, of portrait lighting in close-ups, and of



"The Last Chance," Swiss-made photoplay released in the United States by Metro-Goldwyn-Mayer, is especially notable for the completely authentic style of its photography. Well in keeping with the documentary theme of the film, the camera work is both polished and realistic.



Interior sequences of "Portrait of Maria," outstanding Mexican film released world-wide by Metro-Goldwyn-Mayer, makes skillful use of spot-lighting, low-key, and rim lighting to give realistic effect of source illumination.

unusual compositions. The results have been most pleasing.

The self-conscious and frequently forced cinematic devices of Noel Coward's "In Which We Serve" have given way to the realistic, yet smoothly controlled camera techniques of the same producer's "This Happy Breed". This film, photographed with a pastel freshness in monopack Technicolor, is a gem of motion picture-making in that all of its camera effects are strictly motivated by, and in keeping with, the subject matter of the film.

The use of color in British films has progressed another leap in Mr. Coward's delightful comedy, "Blithe Spirit", now in current American release. "Henry V" and "Caesar and Cleopatra", both period Technicolor epics, also contain some breath-taking color cinematography.

Britain has special reason to be proud of two recent releases: "The Man in Grey" and "The Seventh Veil"—both of which have been filmed with superb polish. The lighting in these two films departs from the flatness that formerly characterized British films. Instead, modelled lighting and well co-ordinated camera movement give depth and dimension to both films.

So we say that the documentary approach which used to be the keynote of British cinematography, is now giving way to a smoother, more polished technique especially tailored to the demands of the fictional photoplay.

France

French films have long been greeted with delight by those in this country who are devotees of foreign cinema.

Especially well-received in the past were such witty Gallic comedies as "The Baker's Wife" and "Carnival in Flanders", and dramas such as "Grand Illusion", "Un Carnet du Bal", and "Port of Shadows".

While all of these films revealed dramatic artistry, most of them suffered from inadequate and stilted photography. The French cinema industry

was just growing up, striving to achieve a style, hoping that the dramatic contest of its films would outweigh obvious technical faults.

"Un Carnet du Bal" utilized perhaps the most unusual camera approach of any French film up till the present day. Psychological and episodic in content, it artfully combined extreme camera angles with radical lighting to achieve camera effects keyed to the changing moods of the story.

"The Baker's Wife" was shot with complete realism in natural locales, and with the accent more on dialogue and action than on camera treatment. "Harvest", by its utter simplicity managed to attain a certain idyllic beauty, although this effect could have been enhanced by a more imaginative camera style.

During the Nazi occupation, the films turned out in French studios were for the most part dull and lifeless. The French "spark" was missing, both from the dramatic and technical viewpoints. It was inevitable that a reaction amounting to over-compensation was bound to come. It appeared several months after the liberation of Paris in the form of a three-hour, two million-dollar film colossus titled "Les Enfants du Paradis". This picture boasted some of the most beautiful photography ever put on celluloid. Every scene was a camera triumph. The lighting was velvety and flattering, the camera-movement was subtle and smooth. The over-all effect smacked of a too-perfect glamour. So dominant was the camera, that there was very little action in the whole film. Mostly, the characters stood and talked at each other, while the camera recorded first one gorgeous com-

(Continued on Page 140)



Heavily filtered exteriors add much to the rotogravure realism of "Portrait of Maria," filmed with a good deal of cinematic artistry against the lush natural backgrounds of Old Mexico.

Filming Adventure *in* Northern Alaska

By KATHLENE WOLFE

ROBERT L. Shankel, professional photographer and traveler, is an authority on photography under frigid and sub-zero conditions, having traveled throughout Alaska extensively for six years. He lived for one year at Cape Prince of Wales, habitat of the true Eskimo and the backdrop for his current 16mm. Kodachrome 45 minute feature, "ENIPEYUK (Eskimo)—SURVIVAL IN THE NORTH," which he made during that year. The village is situated near the Arctic Circle forty miles opposite the Siberian coast. Induction into the Army temporarily put to one side his research on Eskimo life. The Army Air Forces discovered his working knowledge to be a valuable

asset and stationed him for two and a half years in the Aleutians as a photo technician and ground and aerial photographer.

Due to the existing adverse, hazardous and unanticipated conditions in the Arctic, Mr. Shankel was forced to devise his own system of operating. A Bell & Howell Filmo 70-DA equipped with a wide angle 15mm. F:2.5 Taylor-Hobson-Cooke lens, a 4" F:2.8 lens and a 1" F:1.5 lens; a Roliflex, tripod and only 3000 feet of Kodachrome landed originally with Mr. Shankel at his picture location, a typical native village far above civilization, accessible only by plane or dogteam at that time. In planning his sojourn, Shankel had ordered



ROBERT SHANKEL

flash equipment, a recording set-up, and a surplus of film—all to be delivered by plane once he had established his base. Japan cut loose about that time and such necessary equipment consequently never arrived. Our photographer was stranded, surrounded by grinning, gaping Eskimos and with only the aforementioned equipment and small amount of film to work with. Rough! But as Mr. Shankel points out, "if a seemingly impossible problem presents itself, don't back away—don't take the long way around. Solve it sensibly—then whack it right down the middle."

He took his own words literally. He not only whacked his problems and obstacles down the middle—he cut a clean groove while about it. His picture is proof of his preachings. All odds considered, it is a feat in itself.

Before delving into the technical operations employed by Shankel, here's a little warning to the reader. If you are a photographer whose equipment means more to you than your wife, don't be aghast at Shankel's cruel treatment of his Roliflex. Consider the reasons. Compare it to the patient, pampering way he "babied" his movie camera. If you are a "4 W pro" who is exact as to the why, when, what and wherefores of your game, don't flinch at the seemingly blase manner Shankel "knocked out his picture." Consider the conditions.

Mr. Shankel said, "In planning my trip, I naturally wanted the best equipment available. Previous experience as a traveling photographer throughout civilized sections of Alaska gave me a working knowledge as to how various equipment would react to and operate under sub-zero weather. But I was headed for a remote, unknown section—the actual existing conditions of which I knew little. A thorough climatic and



ONE MAN CAMERA EXPEDITION ON THE ARCTIC SHORES

anticipatory research plus past experience guided my choice of equipment. I also knew my equipment would receive severe rough treatment by being bounced around in a dogsled or boat. I had to have the lightest, and at the same time, the sturdiest and most durable type of cameras. If circumstances and time had permitted my best bet would have been a light magazine camera with a special crank accessory. Under extreme sub-zero weather, a crank is an absolute necessity. But circumstances did not allow me time. A Bell & Howell Filmo 70-DA with a crank accessory was my choice. Because of its sturdy die casting I was assured it would withstand severe treatment and would operate more satisfactorily and be less tempermental than less sturdy models. Its weight (app. 4 lbs.) was a decided advantage.

In the choosing of my still camera, many things had to be considered; weight, size and type of film. Considering conditions I would be operating under, a Speedgraphic or similar model would not fill the bill. Its weight and size would be too cumbersome. Film packs would be inconvenient to carry and, too, in extreme cold, the cement binding paper which holds the paper tab to the film will freeze and pull away from the film. Special accessories affording the use of roll film are available, but again time would not permit a delay. I chose a Roliflex because it was light, compact and convenient.

"The remainder of my equipment was selected with the same forethought, but as my orders were cancelled, the aforementioned cameras shot the entire works."

"My cameras were winterized to withstand 60 degrees below freezing. Any equipment which is to be regularly operated at temperatures below 20°F should be winterized. All lubricants should be removed from ALL inner and outer movable metal camera parts. Gasoline (lead-free) or dry cleaners' naptha can be used. Metal movable parts which contact each other should be smoothed

and buffed to allow for contraction which occurs at low temperatures.

"Even with this precautionary winterization, my equipment froze up mainly because I had new instead of *well broken in* equipment. Too, the type of cold at Cape Prince of Wales, a coastal village, is damp and affected the movable parts more so than dry cold. The contraction on outer metal movable parts was so severe it took all my strength to move them. The inner metal movable parts on my movie camera were so affected the spring tension wasn't great enough to move working parts. I would have to hold starter button down, and crank to start operation. Time upon time I would have to completely disassemble cameras and buff and sand down movable parts. Especially was this necessary on the Roliflex. I buffed it to such an extent it would practically rattle, but when gradually subjected to the extreme cold it would again tighten up. I often wished I'd had a supply of simple Box Brownies!

"Cold equipment brought into warm air will condense moisture from vapor in the warm air. This "sweating" is harmful and will freeze if equipment is subjected to freezing temperatures before condensation has completely disappeared. Lenses will not give sharp definition if there is a great temperature difference between different parts of the lenses. A lens will generally be out of focus while its temperature is changing. I never brought my equipment into my shack except when special coverings were made or equipment need adjusting. The cameras, in cases, were brought inside, placed in a corner away from stove and left for an hour or so, gradually adjusting to room temperature. I would then place the equipment up higher, as heat rises, and leave a while longer. Even before taking camera from case, I would "hand-test" to be certain air inside case was the same temperature as outside. Then and only then did I take cameras out for repairs. After the cameras had been worked on,

I went through the same process in reverse, readjusting equipment from warm air to cold.

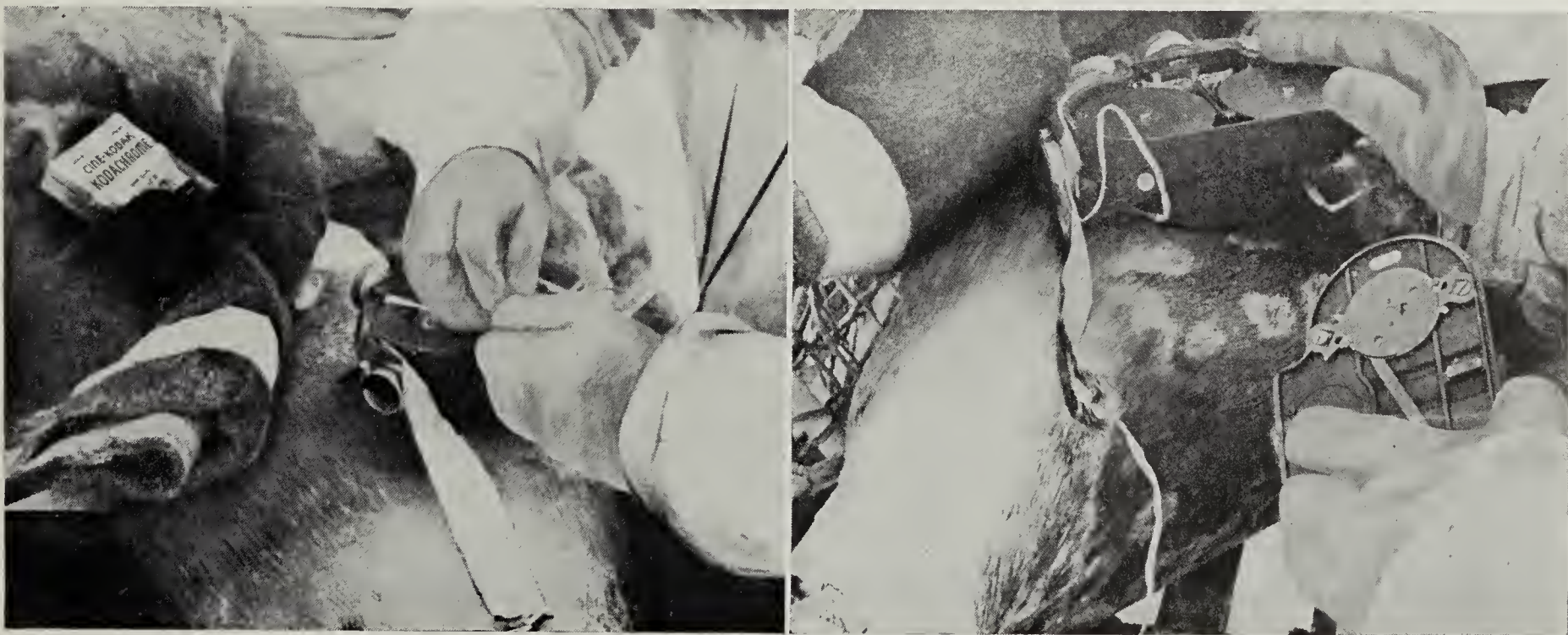
"During my travels throughout Alaska, I learned the fundamentals of processing film in extreme low temperatures. My 'improvised' laboratories were extremely crude. Necessity proved to be the mother of invention.

"There were times when I had to use melted snow and ice for processing solutions and in the washing of negatives and prints. Often times the prepared solutions, which had been set aside to be used again, would freeze solid, and the containers if filled too full would crack under the pressure. To prevent this I would store solutions near the ceiling of the lab. However, I found this freezing did not effect the energy of the "soup" providing the chemicals had not been previously effected before dissolving. A marked precipitation from the damp cold often times took place in stored chemicals. Once precipitated these chemicals would become inactive, invariably decreasing energy of developer.

"For instance, the solubility of hydroquinone, when subjected to low temperatures would decrease rapidly. Crystallization would take place, if a solution containing hydroquinone were subjected after using, to temperatures lower than 40°F. Small, needle-like icicles would form causing black specks on contact with emulsions of negatives. The energy would still be effected even if these precipitates were filtered out or redissolved by warming. I found I could prevent this crystallization if isopropyl alcohol were added up to 10% of the developer volume. Butyl or ethyl alcohol could be used for this same process, but I used isopropyl because of its high solvent properties. However it was much simpler to set this solution where a temperature would not cause this crystallization.

"Often times when excited and eager to see immediate results of an unusual

(Continued on Page 138)



EXTREME DIFFICULTIES OF CAMERA LOADING ARE ILLUSTRATED IN ABOVE STILLS

CHINA'S WARTIME FILM INDUSTRY

By JA TEH-LAN

IF any medals are to be given motion picture camera for war service, the China Film Company has a candidate. This studio's Bell & Howell camera (No. 799) was no youngster in 1938, but since then, it has photographed 14 feature-length productions and any number of short subjects under probably as tough conditions for continuous operation as any studio lens box in the world.

The technicians who have nursed old 799 through all this footage do not claim she is as good as new, but they will take her down the Yangtse when the river rises again this spring to photograph the completion of the move of the Chinese Army's battered studio back to the east coast. By then it is hoped that the new American equipment will be available to revitalize the Chinese motion picture industry which took exile and bombing—but can now look back proudly on having done its job in the long war against the Japanese aggression.

Protecting Equipment

In 1937 there were six Chinese studios in regular production, although American films dominated the market in the some 200 commercial theatres then oper-

ating. As the Japs swept over Shanghai and Nanking, the problem of the Chinese movie makers was to get out and save at least some of their precious equipment. One move after another was made, with losses each time by either capture or fire. As the little industry fled for its life to Nanking, Hanchow, and finally on the long trip up the river to rocky Chungking, the studios were consolidated into one organization under the Political Training Board of the Chinese Army. Two other groups, also as part of the Government, were the Central Film Studio and the Educational Film Studio, but—since the main job was military—nearly all the scanty equipment which could be saved was operated by the Army picture makers as the China Pictorial Service or the China Film Studio.

Hilltop Studio Site

On one of the highest hills in Chungking, an old Bhuddist monastery was taken over in 1938 for the studio. The following titles will indicate the kind of pictures which the Chinese made during their country's most desperate years: "Defend Our Soil," "Fight to the Last," "Good Husband and Good Soldier," "Anti-tank Defense," "The Light of East Asia," "On the Border Front,"



Cameraman Wang Sze-chen setting up to shoot a military training demonstration on location near Chungking

"Revival Through Flame," "Storm Over Mongolia," and "The Secret Agent of Japan." "Return to Our Country" and "Police Soul" are among the latest productions, these two being completed in 1945.

Unfortunately, the next hill on one side of the studio sheltered most of the government War offices and the hill on the other side held the municipal water reservoir of Chungking, so when the Japs came bombing, the studio caught more than its share. The newsreel men, however, also got some magnificent photography. Much of the dramatic film material for "Battle of China," produced by Frank Capra in his outstanding series of orientation films for the American Army, came from the brave and skillful work of the Chinese newsreel crews in Chungking, and those attached to the struggling armies of the Chinese Central government.

Auxiliary Military Education

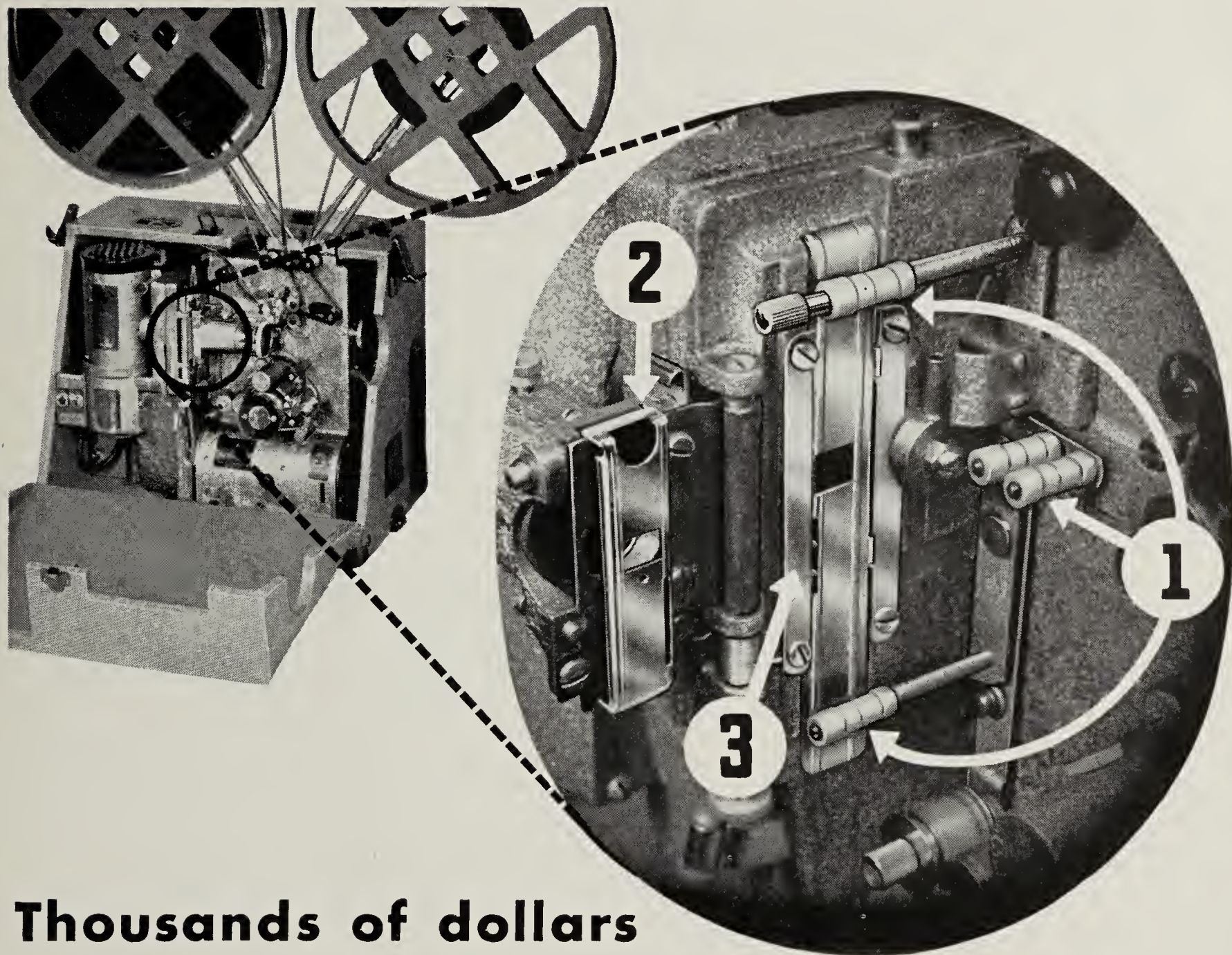
Chinese cinematography during the war included only a few subjects which could be called strictly military training films comparable to the reels produced in such numbers by the Army Pictorial Service and the Academy Research Council in the United States. The Chinese also made chronological war records. But the bulk of their production was designed as "Auxiliary Military Education" and was substantially a cross between training films and the type of semi-documentary entertainment and public morale features which the Hollywood studios made during the war about different branches of the armed forces.

Like these American films, the Chinese productions used professional and

(Continued on Page 148)



To reach the millions of troops still in the armies of China, 40 mobile projection units have been set up in the field to exhibit morale, training and entertainment films provided by the Army Pictorial Service of the Central Government.



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M A S T E R P I E C E O F I 6 M M C R A F T S M E N

Carleton of Hollywood Colorfilm Back From Agfa Checkup

C. H. Carleton of Hollywood Colorfilm Corporation is back from Germany, where he got an insight into the improvements of color film processing as developed by the Agfa engineers and technicians during the war years.

Special group of American color experts was headed by Nathan Golden, chief of the foreign motion picture division of the Department of Commerce. Others in the party included: Harold Harsh of Ansco, H. Werner Sachs of Photo Products division of Remington-Rand, and Lt. Col. Richard Ranger, who met the party in Europe and arranged details of visits and interviews.

Carleton stated the party went through several film and camera plants in the American zone of occupation, watched the processing and making of film, and interviewed the top directors, chemists and research engineers of Agfa who were all in the American zone.

Information received, he declared, filled in gaps with specific data and details which had not been previously disclosed with relation to the processing of color film, and especially resulted in the correction of chemical formulas. A 34 page report was prepared by the group, and will shortly be released generally to the film industry by Golden in Washington.

Bulk of information compiled indicated that the Wolfen Agfa color film plant is now being operated by the Russians, as the factory is in latter's zone. Conclusion is that the Soviet is using the color film manufactured for its own state film activities.

Although Carleton could not discuss technical details uncovered by the investigating group because of the early issuance of the combined report, he did point out that current newsreels in color had been released regularly in Germany during the war, with the prints being shown in the theatres generally within a week after being originally shot. He disclosed that prints of these color newsreels are being brought back to the United States for general information of the industry, together with prints of features and shorts also turned out in color.

Total of 12 features and about 50 short subjects—in addition to the newsreels—were produced via the Agfa color process during the war, Carleton stated, and many of these displayed a much better overall color quality for depth, definition, pastel and vivid colors, than the color in "Girl of My Dreams," German-made color feature which was shown generally in Hollywood and New York to interested film officials.

The German film industry was particularly short of cameras and production equipment, Carleton commented. For this reason, three okayed shots of every scene for a picture had to be okayed for negative, as only one camera was being used at all times. De Brie super parvo and Eclair cameras were generally used by the German studios, while Arroflex cameras were utilized for newsreel work. Latter are decidedly compact and light in weight, carrying 200 foot magazines; however, there were very few of them in the hands of the Germans for use.

"Floating Film" Features Bell & Howell Projectors

Prolonging the life of home movie makers valued pictures has been a major concern of movie equipment manufacturers. Developed film has long been protected by chemical processes, but these alone are not enough if the projector subjects the film to excessive wear as it is carried through the machine. This wear is caused mainly by the sprockets, rollers, and guides. Quick, effortless film threading is of no value if, in the process, the film is scratched or punctured.

Answer to these problems is claimed by Bell & Howell Company for its "floating film" features. Their movie projectors are said to be equipped with sprockets and rollers that do not permit the picture area or sound track of the film to touch any stationary metal parts as it passes through the machine. Thus, scratching of the emulsion is eliminated, providing longer lasting clarity of pictures.

This has been accomplished by placing on the sprockets, rollers, gate shoe, and guides, a thin land or ridge which is the only metal that contacts the film. This has been accomplished by placing on the sprockets, rollers, gate shoe, and guides, a thin land or ridge which is the only metal that contacts the film. This land is so located that it touches the film near the perforations, *outside* the picture area. The shuttle teeth, transporting the film past the aperture, move in a rectangular path. This straight in—straight down—straight out—action prevents the teeth from "sawing" on the edges of the film perforations.

Sprockets and sprocket guards are designed to prevent incorrect film threading. The film is either properly threaded on the sprocket, with the teeth engaging the perforations correctly, or it is held clear of the sprocket teeth by the guard. There, although it is obviously not correctly threaded, no damage to the film can result even though the machine is started. When correctly threaded on the sprockets, the guard positively prevents the film from coming off. These sprockets are claimed to greatly simplify film threading.

Victor Donates Visual Scholarships

To encourage and further the increase of visual education, Victor Animatograph Corporation has provided funds for two 4-H Club scholarships in visual education. Check to cover the scholarships has been turned over to the National Committee on Boys and Girls Club work by S. G. Rose, executive vice president of Victor Corporation.

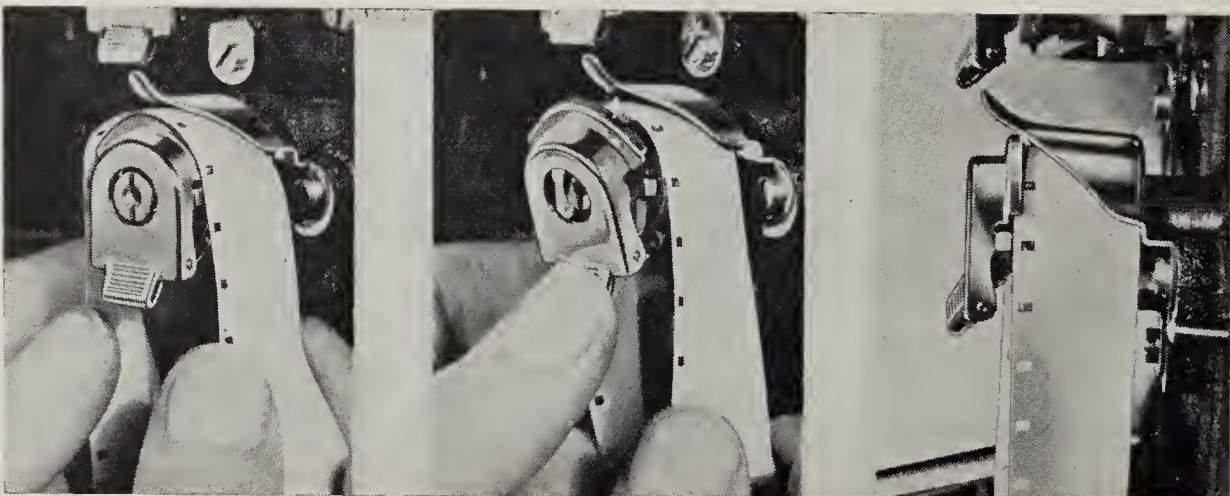
Contestants for the scholarships are required to show evidence of interest and experience in the operation of motion projection equipment, use of cameras, slidefilms, slides and other visual aids. Victor Animatograph is one of the leading manufacturers of 16 mm. sound projectors and equipment.

Telefilm Completes 16mm. Newsreel

Telefilm technicians have completed sound dubbing and release prints via kodachrome of the second release of "Planet News." Latter is strictly a 16 mm. newsreel, and was photographed in color by Tom Braatelein and Ed Drews.

Denham Promoted by DuPont

James S. Denham, who has been assistant manager of the Rayon department of DuPont, has been appointed general manager of the Photo Products division to succeed George A. Scanlan. Latter retired last month due to health reasons. Both Denham and Scanlan joined the DuPont organization in 1915.



Bell & Howell sprocket and guard designed to eliminate film wear. When film is incorrectly threaded, guard holds it clear of sprocket teeth.

HOW TO MAKE A "HIT"—HIT!

WHEN you get hold of a wonderful script, remember—

It's the small details that make a "hit" click with critics and audiences.

And though the choice of film may seem a small detail, you'll realize just how important it can be when you see the smooth gradation and sensitive panchromatic color response of Ansco Supreme film.

Ansco Supreme has high resolving power and excellent fine-grain qualities. It provides you with negatives that yield beau-

tiful release prints. In competent hands, such film can mean *better photography!* Insist on Ansco Supreme for your next production.



KEEP YOUR EYE ON ANSCO—FIRST WITH THE FINEST



LEON SHAMROY, A. S. C., being presented with the Academy "Oscar" by David Wark Griffith, dean of producers and directors, for best color photography of 1945.

ACADEMY AWARDS for the most outstanding achievements in motion picture photography, presented at the 18th annual Awards of Merit event of the Academy of Motion Picture Arts and Sciences at Grauman's Chinese theatre, Hollywood, on the evening of March 7th, honored Henry Stradling, A. S. C., and John Fulton, A. S. C.

Stradling received the annual Oscar for best achievement in black-and-white cinematography for his photographic direction of the Metro-Goldwyn-Mayer production, "The Picture of Dorian Gray." Shamroy's direction of photography on the Twentieth Century-Fox production, "Leave Her to Heaven," gained him recognition for the best in the color classification. Fulton's special photographic effects for the Samuel Goldwyn production, "Wonder Man," was judged best of the year in that field.

Presentation of the Oscars for best

photographic achievements of 1945 was made by David Wark Griffith, whose pioneering as a director and producer in the formative years of the motion picture industry was a major factor in the rapid progress of the business. Just as important were his many innovations of camera techniques which were rapidly adopted by other producers and directors.

For Shamroy, the Oscar represented the third time that he has been accorded honors by the Academy for outstanding color photography. Last year, he stepped to the platform to receive the award for best color cinematography on 20th-Fox's "Wilson," and previously his color photography for "The Black Swan" was tabbed as best of 1942.

LEON SHAMROY

"Leave Her to Heaven," the motion picture that won for Leon Shamroy, A.S.C., the 1945 Academy award for color cinematography, is a film that

Harry Stradling John 1945 Academy

combines the art and science of the camera to very best advantage.

Basically a dramatic story, the film was handsomely mounted and featured striking modern interiors, lush natural exteriors, and a good deal of stunning feminine wardrobe—as well as the highly photogenic facades of the players themselves.

Obviously, the task confronting the cinematographer was a difficult one. In translating this story into "gorgeous Technicolor," his foremost objective was to record and enhance the dramatic values of the script. The story abounds with tense, forceful situations, and it was as much the job of the cinematographer as it was that of the director to portray these clashes of human emotion to best advantage.

On the other hand, the highly photogenic sets and locales fairly cried out for striking picturization on the screen. The average cinematographer might have been tempted to let the cinematic possibilities of these elements run away with him, but Shamroy achieved just the right balance. His camera was used primarily to further the dramatic impact of the story—but at the same time (and without detracting from the action) he managed to bring out the full richness of the beautiful settings against which the story is set.

Technically, the photography in "Leave Her to Heaven" reached a new high. It shied away from flat, undramatic set illumination, and achieved a warm mellow effect by the use of modelled interior lighting. While duplicating source lighting in most cases, Shamroy still managed to place his lights in a way that focused attention dramatically on the action at hand. It was at the same time emphatic and pleasant to look at.

Especially well done was the low-key exterior sequence on the mountain top during which the main character mounted on horseback scatters the ashes of her dead father to the winds. This

Leon Shamroy Fulton

Award Winners

by WALTER R. GREENE

sequence demanded effects which were particularly difficult to record in color. An authentic atmosphere of dusk was required, but in toning down the general landscape effect, care had to be taken not to let the players blank out into silhouette. The expressions on their faces were of highest dramatic importance at this point of the story, so enough detail had to be retained in shadow areas to show these expressions while keeping the general key low enough for an authentic dusk effect. Needless to say, Shamroy achieved this balance most effectively.

Wisely, the cinematographer made use of simple compositions which succeeded in bringing out the innate beauty of the settings, steering clear of complicated approaches which would have detracted. All in all, the color photography was of supreme quality, admirably suited to the changing dramatic patterns of the story.

HARRY STRADLING

"The Picture of Dorian Gray," which won for Harry Stradling, A.S.C., the 1945 Academy award for black and white cinematography, is an ideal example of what the industry would call "quality" dramatic photography. The film itself revolves about a bizarre situation: a man who remains the same age in appearance while his portrait grows older, reflecting the hideous ravages of his sinful life. It would have been the natural inclination of most cinematographers to utilize a similarly bizarre style of photography to complement this wierd theme. But Stradling adopted an entirely different approach; he used a smooth, rich technique which by its very restraint and understatement succeeded in pointing up the unusual dramatic situations involved. The contrast packed a potent wallop.

Technically, Stradling's photography in "Dorian Gray" was superb. Richly



HARRY STRADLING, A. S. C., receiving the Academy "Oscar" from David Wark Griffith for best black-and-white photography of 1945.

contrasting blacks and whites, "sculptured lighting," forceful compositions—all these imparted a kind of velvety richness to the film, and yet the style used was not of the pure "glamour" variety. Rather, it managed to achieve a dramatic emphasis that added force to the presentation of the story.

Especially forceful were the camera compositions. Stradling has a fine style of using foreground objects to frame or point up action taking place in the background. He has mastered the technique of knowing when this treatment will add rather than detract from the scene, and he uses the device most skillfully.

Fluid camera movement played an important part in placing this film on top for the Academy award. Skillfully keyed to the action, Stradling's mobile camera moved from one effective composition to another without calling attention to itself.

"The Picture of Dorian Gray" is a

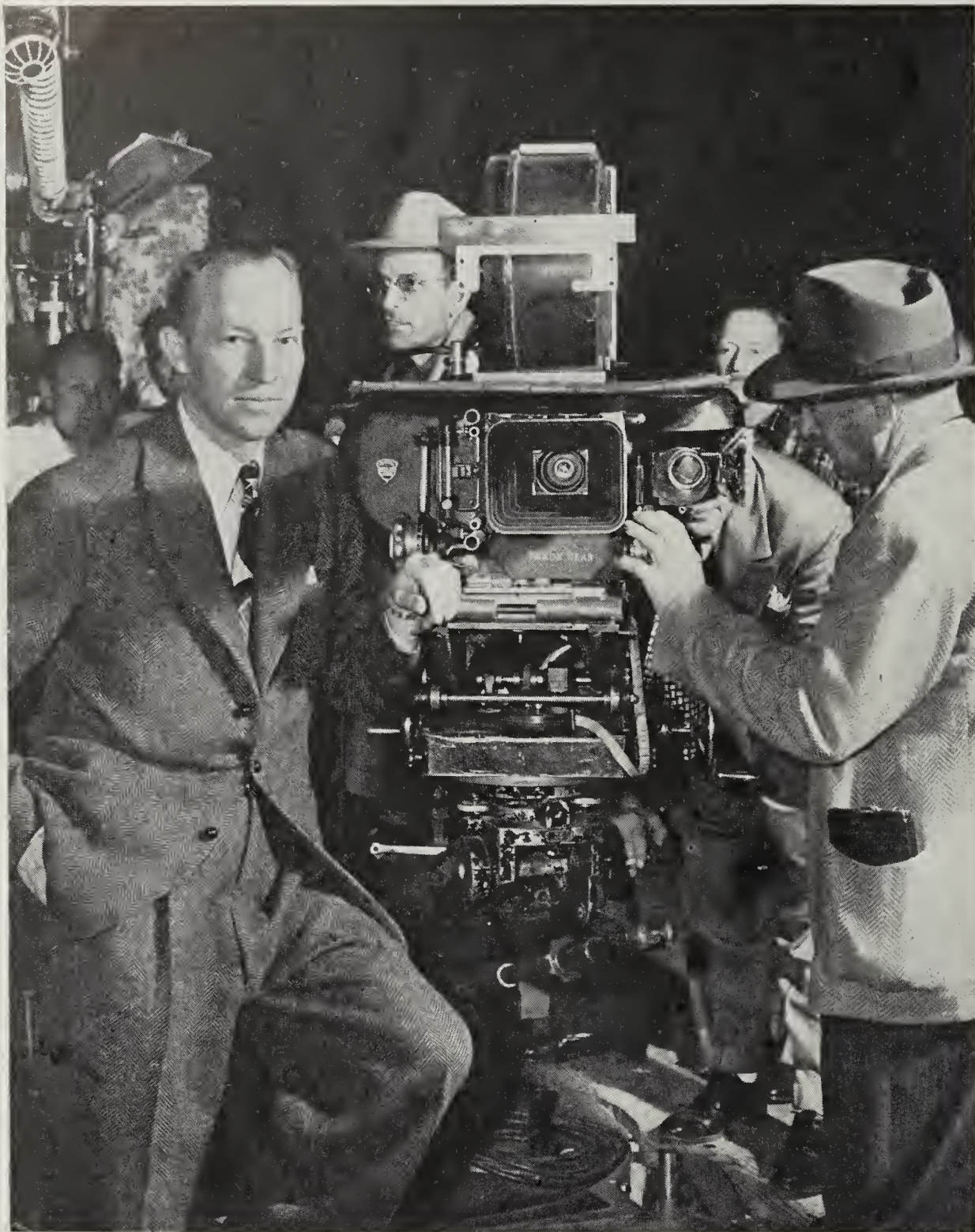
cinematographer's picture in that it represents beautiful photography skillfully tailored to the requirements of an unusual dramatic story.

JOHN FULTON

John Fulton, A.S.C., is the recipient of the 1945 Academy award for his special photographic effects in the Technicolor film "Wonder Man." In this film, Fulton had his work cut out for him, since practically the entire picture relies on special effects for its story content.

The film concerns a pair of twin brothers, one of whom is killed off early in the action, but who returns quite frequently in ghost form to hold long discussions with his still-living twin.

The special effects of the twin brothers (both played by the same actor) appearing together in the same scene, was accomplished by a series of matte shots extremely difficult to produce in color. This device is not new, but rarely if



JOHN FULTON, A. S. C., (left) who was awarded the Academy "Oscar" for the best photographic effects of 1945.

ever has it been so effectively utilized as in "Wonder Man." So excellent was the balance in lighting, the matching of perspective, and the duplication of color temperature—that even a technical audience was not conscious of "trick" photography.

It is a tribute to Fulton's technique that the double-image sequences, the appearance and disappearance of the "ghost," and other tricky devices used in the picture were produced with such finesse that they seemed a natural, even *realistic*, part of a story that was in content almost pure fantasy.

Other Technical Awards

Stephen Dunn and the sound department of RKO Studios received the Academy award for the best sound recording on feature releases of 1945 on production of "The Bells of St. Mary's."

Upon recommendation of the Academy Research Council, and after careful con-

sideration of scientific and technical procedure and equipment, the following awards in Class II of the Research Council were announced:

To: Loren Ryder, Charles R. Daily, and the Paramount Sound Department for the design, construction and use of the first dial controlled step-by-step sound channel lineup and test circuit.

Previous to the development of this equipment, sound channel lineup and testing has been handled by means of auxiliary equipment. During the course of time, development of sound recording equipment has resulted in the introduction of test procedures which had become increasingly more complicated and increasingly more subject to error. This new device simplifies the lineup, testing and trouble shooting in a sound channel, and specifies a fixed step-by-step procedure which eliminates the possibility of error and permits a 100% test metering with resultant easy localization

of trouble, without interruption of the mixer monitor and with automatic return of all circuits to normal for recording.

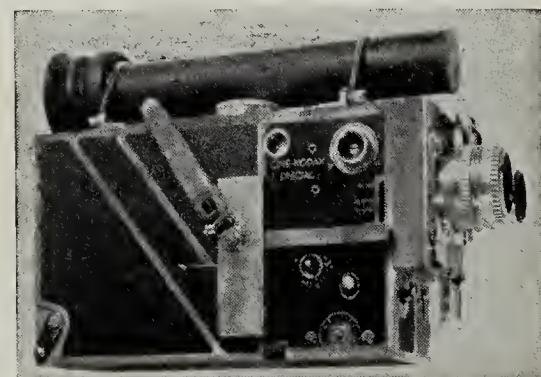
To: Michael S. Leshing, Benjamin C. Robinson, Arthur B. Chatelain and Robert C. Stevens of 20th Century-Fox Studio, and John G. Capstaff of the Eastman Kodak Co., for the 20th Century-Fox Film Processing Machine.

This machine incorporates several new scientific principles for the processing of film as well as a number of mechanical improvements in film handling features. By means of controlled turbulence and agitation, the machine eliminates directional effect inherent in conventional methods for development of film. Means for driving the film through the tanks is arranged to control the tension so closely that variations in the strain in the film is held to less than one ounce from the beginning to the end of the machine, to thus eliminate scratching and reduce film breakage to a point where it is no longer a major concern of the machine operator. In case of breakage, however, automatic means are provided to shut off the feeding of film into the tank while at the same time the other end of the film is carried on through the tank in the usual order.

Automatic Fade Device For Cine Special

An automatic fade device of utmost simplicity has been designed by Joseph Yolo, producer of industrial films, who recognized the need for such an accessory in his film work. After designing the automatic fade for his own use, he launched on a manufacturing program which is placing many devices in the hands of 16 mm. professional and amateur cinematographers.

The attachment is assembled on the right side of the camera, with only minor revisions of the regulation setup required. Only a slight bending of the standard shutter lever so that the latter does not engage the notches on the index plate, is all that is required. No holes have to be drilled on the camera itself. Operation is from the winding crankshaft, with the lever arm automatically extended to operate the shutter lever for fade in or fade out—whichever might be required on a specific scene.



Yolo Cine Fade Device
Model A

The Members of
**The AMERICAN SOCIETY
of CINEMATOGRAPHERS**

Extend congratulations to . . .

HARRY STRADLING, A.S.C.

LEON SHAMROY, A.S.C.

JOHN FULTON, A.S.C.

*for their outstanding achieve-
ments in cinematography during
1945 which accorded them
Academy Award recognition.*



My Sincere Thanks,

HARRY STRADLING

ASC

Best Black and White
Photography
Award

“THE PICTURE OF DORIAN GRAY”

Metro-Goldwyn-Mayer Production

1945

18th Annual Awards

ACADEMY OF MOTION PICTURE ARTS AND SCIENCES

To My Fellow Cameramen, Thanks

LEON SHAMROY

ASC

Best Color Photography Award

1945—"LEAVE HER TO HEAVEN"

1944—"WILSON"

1942—"BLACK SWAN"

for

20TH CENTURY-FOX

1945

18th Annual Awards

ACADEMY OF MOTION PICTURE ARTS AND SCIENCES

Gratefully,

JOHN FULTON

A. S. C.

SPECIAL EFFECTS

AWARD

“WONDER MAN”

SAMUEL GOLDWYN PRODUCTION

1945

18th Annual Awards

ACADEMY OF MOTION PICTURE ARTS AND SCIENCES

We Proudly Congratulate —

LEON SHAMROY, A.S.C.

Director of Photography

For Outstanding Photographic Achievement
In Color

“LEAVE HER TO HEAVEN”

20th Century-Fox Production
in
TECHNICOLOR

JOHN FULTON, A.S.C.

Special Effects

“WONDER MAN”

Samuel Goldwyn Production
in
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HARRY STRADLING, A. S. C.

Director of Photography

SAM LEAVITT

Operative Cameraman

FRANK PHILLIPS

1st Asst. Cameraman

EDWARD DAVIS

2nd Asst. Cameraman

For Outstanding Photographic Achievement in
Black & White
Metro-Goldwyn-Mayer's

“PICTURE OF DORIAN GRAY”*

Also . . .

STEPHEN DUNN

and the Sound Department of

RKO-Radio Pictures, Inc.

for their Outstanding Achievement in Sound Recording
Rainbow Productions

“THE BELLS OF ST. MARY’S”**

* Photographed on



Superior 2—Type 126

** Recorded on



F.G. Sound Recording—Type 226

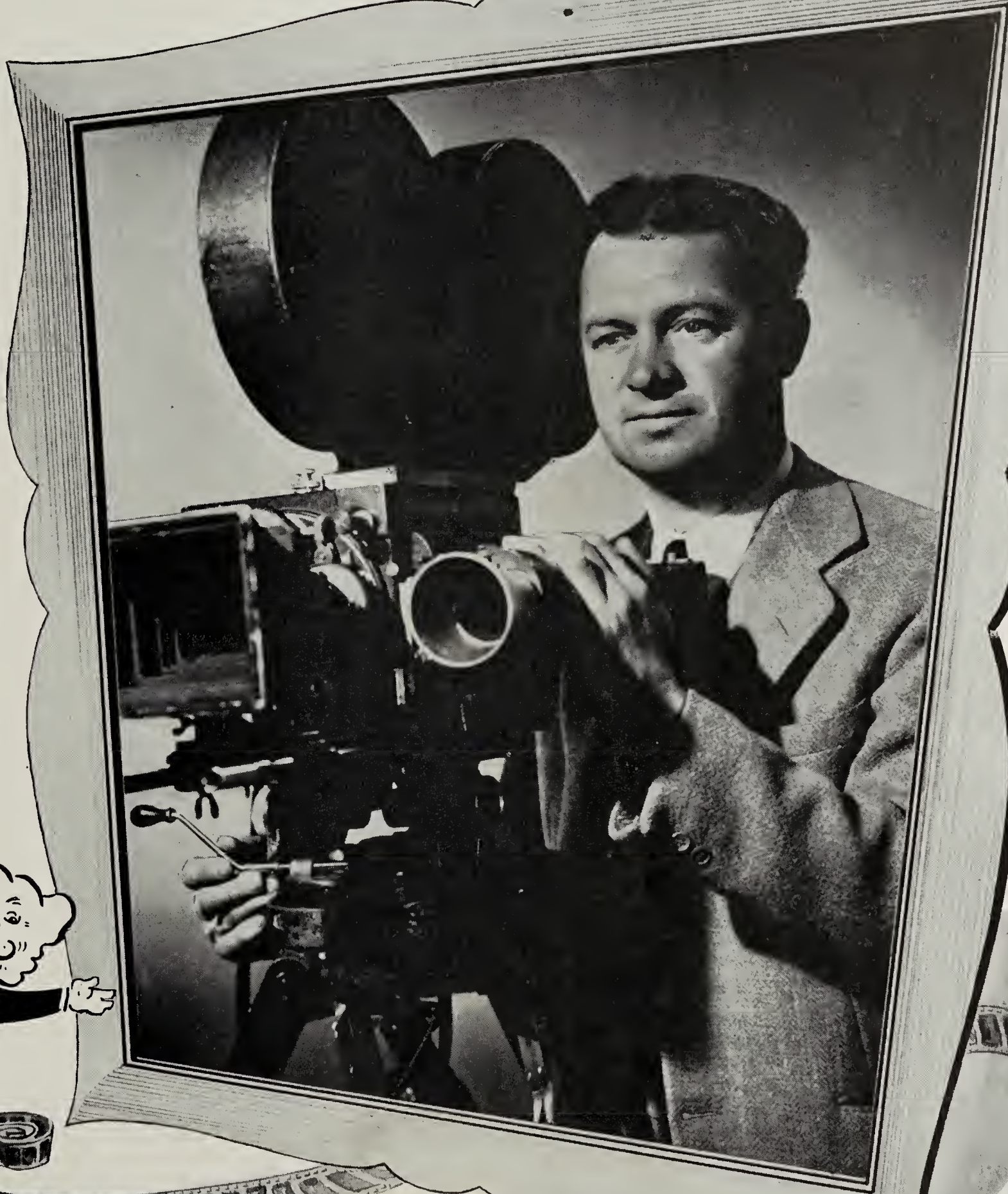
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METRO-GOLDWYN-MAYER is PROUD of
HARRY STRADLING

and congratulates him for his Academy Award
for the Black and White photography of
"THE PICTURE OF DORIAN GRAY"

THROUGH the EDITOR'S FINDER

PRESENT STATUS of development of Ansco color film for eventual use by the motion picture industry was explained in detail by E. A. Williford, vice president of General Aniline and Film Co. in charge of the Ansco division, at meeting of the American Society of Cinematographers on evening of March 18th.

His talk, which was clear-cut and informative, served to discount many inaccurate trade reports both about the company itself and the color process now in the course of development for commercial use in 35 mm. form. After briefly sketching recent corporate history of Ansco, including acquisition of the company in 1928 by the German Agfa concern and seizure of the corporation by the Alien Property Custodian at outbreak of the war, Williford impressed that the company was now entirely American-owned and controlled to prevent any future acquisition by foreign interests.

During the war years, he stated, the Ansco research laboratories and scientists had made most important progress in the development of its multi-layer color film stock. So much so that—when facts of wartime German progress at the Agfa plant at Wolfen were disclosed—it was found that the Ansco engineers were far ahead; and only one German

formula was as good or better than those developed by the Ansco staff. That was the cyan color former, which will shortly be incorporated in the manufacture of Ansco color film stock.

Status of the American use of the German color film patents was fully explained. Williford stated that Ansco had a contract with I. G. Farben for American rights to all such patents, and that contract has never been cancelled. He anticipated that any German patents of Farben covering film manufacturing or processing which naturally were not filed during the war years, would eventually be turned over to Ansco without reservation.

The executive admitted that the present Ansco plant—plus the new addition now under construction—could not meet the requirements of the Hollywood studios and distributors for negative and positive stock for a long time to come. Answering a question, he disclosed that some quantities of Ansco color film would be available for studio production use in 1947.

Ansco's capacity for 35 mm. color film will be in the neighborhood of 150,000,000 feet annually. Because of the added steps in manufacture due to the five separate emulsion coatings on the film base in contrast to the two coatings necessary on black and white raw stock, Williford pointed out that overall plant capacity is reduced more than 50 per cent. Further, he disclosed, there are certain refinements in manufacture to be accomplished before the Ansco color film can be utilized for general studio production. While these are being perfected, however, the company is cooperating in developing the laboratory development procedures for the color film negative and positive so that when the film does become available in sufficient quantities, the producers will be familiar in detail with the laboratory requirements and methods for best results. Producers will, he assured the gathering, be able to handle development and processing of both negative and positive in their own laboratories without any outside facilities for such work required.

Atomic Bomb Filming

Motion picture photography will play a most important part in the coming atom bomb tests in the Pacific, and a number of members of American Society of Cinematographers will be active in directing the huge camera organization being set up to record the event, as well as actually shooting the film. Major Gilbert Warrenton was only on inactive status for two days after four years of duty with the Army Air Force photographic unit—much of it overseas—when he was called back to serve for the duration of the atom bomb project.

Major Warrenton lined up Paul Perry, Harry Perry, Captain Lloyd Knechtel, Captain Tom Tutwiler—all members of A.S.C., and specifically requested for

the project by the AAF because of their experience in production cinematography and prior service. It is expected that the photographic unit under the AAF wing will comprise around 250 men, including second cameramen, assistants, film cutters, loaders, and other necessary for the efficient operation of the photographic organization.

General Spaatz of the AAF has directed B29s, photo planes and bombers be placed at the disposal of the photographic unit crews. Standard and speed cameras, using both black and white and color negative, will be used in recording the most historic event. According to information released in Washington, the AAF will take charge of all the aerial photography in connection with the project, including the actual dropping of bomb, its landing, and the devastation that will follow. Each camera ship will be briefed in advance to focus its cameras on a specific point or object, so that a most detailed and complete visual history will be recorded.

Navy Photographic Program

From information approved by the Navy security office in Washington, disclosure is made that the Navy will utilize remote-controlled, long range motion picture cameras on the ground and at sea level for additional angles of the bomb-dropping.

Batteries of cameras are to be mounted atop heavy 100-foot steel towers on several islands five to 10 miles distant from the target, in the Bikini Atoll, Marshall Islands. The cameras must be shielded in tower rooms constructed of thick lead sheets. Inside the lead housing the cameras, additionally protected by airtight, waterproof boxes, will photograph through optically flat windows and thence through portholes in the lead housing, the portholes to close automatically after the pictures are taken, to prevent entrance of radio-active waves. Both the aircraft cameras, which range in size up to the 70-pound Fairchild navy type F-56 cameras with 40-inch telephoto lenses, and the movie cameras, in both 16- and 35-mm. sizes, will point horizontally to the scene of the atom bomb explosions.

The cameras will be operated by radio from a distant ship.

Because of the intense heat that will be generated by the atom bomb explosions, the cameras' lenses will be covered by heavy neutral density filters, which, operated by photo cells, will move away from the lenses to permit photography an instant after the flash. If the lenses were not protected they would let so much heat through the cameras' magazines that the film, even though non-inflammable, might melt.

It is estimated that it may be several weeks after a test before any human can approach the cameras houses, as the surrounding water is likely to be so radio-activated.

ALLEN M. DAVEY, A. S. C.

The motion picture industry lost one of its pioneer cinematographers with the sudden passing of Allen M. Davey, A. S. C., from a heart attack on March 5th at the age of 51. Davey started as a production cameraman back in the early 'teens before the advent of feature length pictures; and in those days was responsible for starting the careers of many present-day cinematographers who—as assistant cameramen—found him an expert and willing tutor.

He left the Universal staff for service in World War I, and later was contract cameraman with National Film Corp. After free-lancing for some years, he joined Technicolor in 1937 as a color cinematographic expert up to 18 months ago when he signed a term contract with 20th Century-Fox. His original engagement by Technicolor—which resulted in progress to one of the foremost color cinematographers in the industry—was paved by Ray Rennahan, A. S. C.—who had originally got his start as an assistant cameraman under Davey's wing many years previously.

During the past six years, Davey was nominated for Academy Award recognition in color photography on four occasions—in 1940, 1943, 1944 and 1945. For the latter year, he received joint photographic credit on Columbia's "A Song to Remember" with Tony Gaudio, A.S.C.

Surviving is his widow; son, Allen M. Davey, jr., an assistant cameraman at Columbia; and daughter, Doris, now stationed at San Diego as a member of the Waves.

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filter holders
- I Oil can
- I Pair pliers
- I Screwdriver
- I Bottle of camera lubricating oil—good for 80 below
zero
- 3 Camera belts—small, medium, large
- I Camera portable power pack shoulder carrying strap
with 6 non-spillable storage batteries and 3 4-volt,
2 6-volt, I 12-volt outlets

SET OF LENSES—Complete\$1,420.00

- I Bausch & Lomb Baltar 50 mm f 2.3 coated lens
- I Bausch & Lomb Baltar 75 mm f 2.3 coated lens
- I Bausch & Lomb Baltar 100 mm f 2.3 coated lens
- I Bausch & Lomb Baltar 152 mm f 2.7 coated lens
- I Bausch & Lomb Baltar 35 mm f 2.3 coated lens

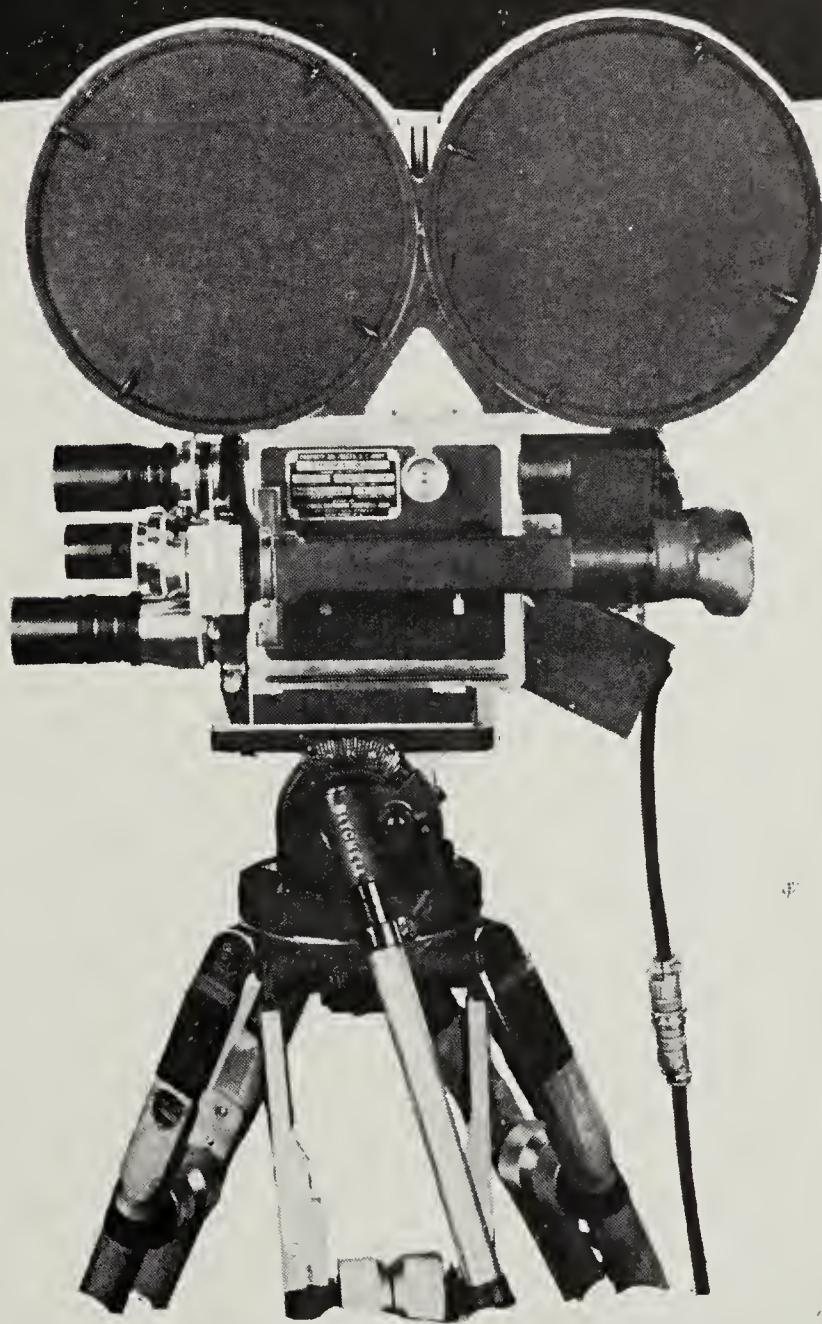
SOUND SYSTEM—Complete\$1,853.00

- I Modulite Galvanometer
- I Amplifier
- I Amplifier Carrying Case
- 2 Amplifier Accessory Carrying Cases
- 2 Camera power cables
- 2 50' microphone extension cables
- 2 Galvanometer Cables
- 2 Amplifier Power Cables
- 2 Sets of Earphones
- 4 Exciter Lamps
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- 2 Microphone tripods
- I Vibrator Pack with 6 non-spillable storage batteries

TRIPOD—Complete\$600.00

- I Tripod (pan) handle
- I Crank handle
- I Baby tripod with carrying case and Hi-Hat
- I Tripod with freehead and boot and saddle
- I Triangle
- I—Magazine carrying case with 2 1000'
magazines\$263.00
- I—Magazine carrying case with 4 400'
magazines\$364.00

TOTAL PRICE\$9,990.00



Compact — light in weight — easy to handle —
incredibly *precise* — the WALL 35MM Sound
Camera meets the most exacting requirements
of the professional photographer. Comes com-
plete with tripod. ACT PROMPTLY to get one
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AMONG THE MOVIE CLUBS

Utah Cine Arts Club

Regular meeting of Utah Cine Arts Club of Salt Lake City was held on February 20th at Teamsters Hall, with president T. R. Pope presiding. Film program included: "America the Beautiful," by LeRoy Hansen; "Crime Does Not Pay," loaned by the St. Louis Movie Club; and "Canyon Caravan," filmed by William Gibson and presented by Jack Brennan. Latter is particularly thrilling, dealing with a boat trip through the most desolate section of the United States, and down the Colorado River from southeastern Utah to Mead Lake.

Technical session, devoted to the separate advantages by beaded, silvered and dull white motion picture screen, was conducted by Al Morton, club's technical advisor, and vice president Pete Larsen. Due to transfer of secretary Lorraine Olsen out of town, treasurer Al Londema has assumed the secretarial duties for the current year.

Westwood Movie Club

Regular monthly meeting of Westwood Movie Club was held on March 1st in St. Francis Community Hall, San Francisco. Film program included: "A Surgical Adventure," by Dr. I. C. Gobar; "Rugged Capers," by Eric Unmack; and "The Good Earth," by Donald Campbell. G. Kenney of Ansco gave a demonstration and talk on the new Ansco color film.

President Fred Harvey announces the following committee chairmen who will function during the year: program, Frank Boichot; membership, Mrs. Ray Luck; technical, Eric Unmack; contest, Dr. I. C. Gobar; publicity, Miss Edna Spree; projection and sound, Ray Luck; social, Mrs. Henry Swanson.

Westwood is planning two exhibitions of members' amateur films for the general public—in May and September. Also being lined up is a club dance.

L. A. Cinema Club Retains Name—But—

Proposal to change the name of Los Angeles Cinema Club to Hollywood Cinema Club was defeated by membership in a mail ballot, with 60 per cent voting to retain the original title. However, on the basis of the vote, and the arguments presented in favor of the new name suggested, it was decided to set up the Hollywood Society of Cinema Artists within the structure of L. A. Cinema Club as a compromise. As a result, everybody's happy!

By-laws are drawn up so that officers of L. A. Cinema are ipso facto the officers of the new inner group—which has no separate officers, independent meetings and no elections. Only members of L. A. Cinema are eligible to join—are not automatically members of the group—for which application must be made and certain requirements met for admission. One basic requirement is that applicant must show some of his work to prove that he is really an artist, rather than just a cinematographic enthusiast, and application must be scrutinized carefully by the board of directors.

Many members favoring the name change have—and plan to—travel in foreign countries, and advanced the point that the name "Hollywood" carries a magical ring in things photographic; and a membership card with Hollywood in the club name will be most impressive in the overseas travels and contacts. Actually, the group-within-the-organization can be stated to include in its roster, the top members of L. A. Cinema who have proved their photographic abilities in making various films.

Film program of the March 4th meeting, chairmaned by Bill Easley, included: "Coral Isle," by Harry C. Chapman; "The Lost Art of Casting in Bronze," by Guy Nelli; and "Garden Gangsters," by Fred Ells.

Metropolitan Club

Interesting program of amateur films produced in various parts of the country held the screen at the February 21st meeting of Metropolitan Motion Picture Club, New York. Pictures included: "Reaping the Rain Drops," by L. B. Reed of Los Angeles; "Ten Pretty Girls," by Anchor O. Jensen of Seattle, Wash.; "Home Movies," by Fred Evans of Sherman Oak, Calif.; and "Incident From Life," by Kendall T. Greenwood of Billerica, Mass. Metropolitan's novice contest has been postponed until June, with entries to be judged by entire membership at the June 20th meeting. Prizes of \$50, \$30, and \$20 for the contest have been donated by Harry Groedel.

Cinema Club San Francisco

Cinema Club of San Francisco held regular monthly meeting on March 19th at the Womens City Club, with film program including: "V-J Day," by Adeline Meinert; "Angels Are Made of Wood," Home Movies Library subject; "Golden Gate Live Steamers Picnic," by Larry Duggan; and "Voorlezer's House," prize winning film from Amateur Cinema League. Member Lou Perrin presented demonstration of General Electric's "sound-on-wire" recorder and reproducer.

Philadelphia Cinema Club

Frank Hirst was elected president of the Philadelphia Cinema Club at meeting held in the Witherspoon Building on March 12th. Other officers elected include: Dr. Raymond Chambers, vice president, Fred Warner, jr., secretary; and Dr. Robert Haentze, treasurer. An 8 mm. kodachrome picture, "Along the Conestoga Trail," by Fred Warner, jr., highlighted the film program of the meeting.

Los Angeles Eight

A most interesting discussion and explanation of interior lighting technique by Glenn R. Kershner, A. S. C., featured the March 12th meeting of the Los Angeles 8mm. Club, held in the Bell & Howell auditorium. In addition, members were treated to an unusual film program of subjects.

Alhambra La Casa

Program for the March 18th meeting of La Casa Movie Club of Alhambra, Calif. was chairmaned by Roy E. Wheeler,, and included the following films: "Fisherman's Dream," (8mm.) by D. A. Powell; "Isles of the Pacific," (8mm.) by L. B. Reed; "Laguna Coast," (35mm.) by Harry L. Hays; "Rose Parade," (35mm.) by Russell King; "A Day at the Races," (16mm.) courtesy of Mr. Zeman; and "The Redwood Empire," (16mm.) courtesy of R. L. Johns.



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Kodak

Alaska Film Adventure

(Continued from Page 119)

day's shooting I would rush into my "homemade" darkroom—heat the "soup" to about 68°F and then immerse the cold film which had been subjected to temperatures as low as 45 degrees below freezing. I might as well have added icicles for the immediate reaction was a decrease in the solution temperature. All the solutions were so effected, resulting in a lower rate of penetration and a decreased reaction rate of fixing. The period of time normally taken in each step of the processing had to be doubled and even redoubled. For example, the fixing time had to be doubled for every 18°F decrease.

Because of the adverse lighting and weather conditions under which most of my scenes were shot, many times I used a safe light to be assured of the

best results. My safe lights often times were crude but not having electricity I did with what I had. I would cut an opening in the wall which connected the darkroom and the living quarters. A gas lamp, candle, or what ever I had available was hung over the opening on the other side and a filter placed over the opening in the darkroom. Simple but effective. Very seldom were my results foggy.

"Many times I had neither fans nor electricity at my disposal. My drying apparatus consisted of makeshift drying racks which were placed as near the ceiling as possible. The temperature near the ceiling afforded more even drying. Differential drying would result in streaked negatives. So that film would dry more rapidly I would dip it,

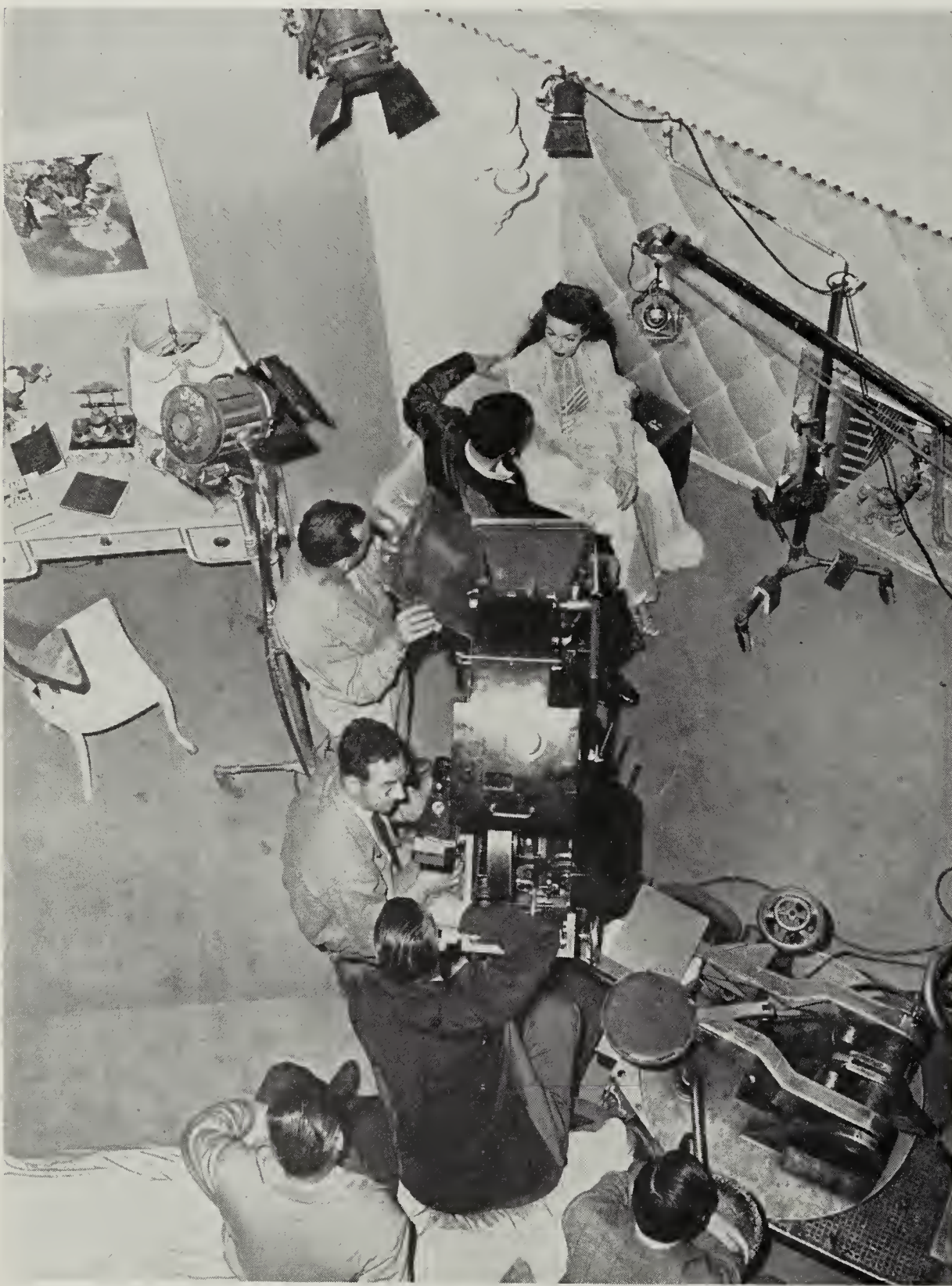
after washing, in a 50% denatured ethyl alcohol solution. I did not use wood alcohol because of its reaction on acetate base film. It would cause discoloration and shrinking. After this bath in the proper solution I would hang the film evenly on racks. Roll film was weighted to prevent curling. I would carefully sponge off excess moisture, especially on roll film, taking special pains not to leave any water streaks.

"In developing glossy surface prints, the low relative humidity would cause prints to become brittle or curl. If a ruler was used or prints pulled across a sharp edge in a crude straightening process, cracking would occur. To soften prints I would set in a glycerin solution (one part glycerin and three parts water) for about 5 minutes. This resulted in a more flexible print and upon drying would receive a finer gloss.

"In adjusting my system of processing to the existing conditions it took patience, trial upon trial and error upon error. I persisted in developing my own work because after each day's shooting I alone knew what conditions I had operated under and could develop accordingly.

"After my first hunting trek, specially designed gloves, tripod and camera coverings were devised. The first time I put my movie camera to my face, I realized I had to have a covering. At such low temperatures, the metal parts became so cold that on contact with warm flesh, the skin would ice-burn. A seal skin covering made by the natives was the solution. It was designed so as not to hinder operations, to keep the sand-like snow from sifting into the mechanism, and to prevent condensing of my breath on glass parts. I also designed a pair of gloves made of unborn fawn skin with the fur turned inward. My cotton gloves proved useless. They afforded me no warmth and were bulky. After my first day's outing, my hands were raw from ice burns and they froze so badly the nails came off. These special gloves had only thumb and forefingers with the rest of the hand enclosed in a mitten affair. They were warm, thin and not overly bulky. They provided insulation and allowed for easy maneuvering. I wore them under heavy reindeer-fur gauntlet mittens from which I removed my hands only for short intervals to adjust or handle equipment.

"However, even with these gloves I was forced to rig up my Roliflex so I could operate it more easily. I couldn't get a hold on the small snaps and knobs with my gloves and couldn't touch them with bare fingers. I devised a handle for the snap of cover of range finder. I drilled a hole in either side of snap, in which I secured a piece of bailing wire. The aperture setting and cocking levers were also rigged with enough wire for easy operating. I drilled holes in the sides of both the focusing knob and crank and attached bent, arc-shaped



AN OVERHEAD shot showing Loretta Young and David Niven in final dialog rehearsal before the cameras roll on Paramount's "The Perfect Marriage." Director of Photography Russell Metty and director Lewis Allen are seated behind the camera checking the proceedings.

(Continued on Page 142)

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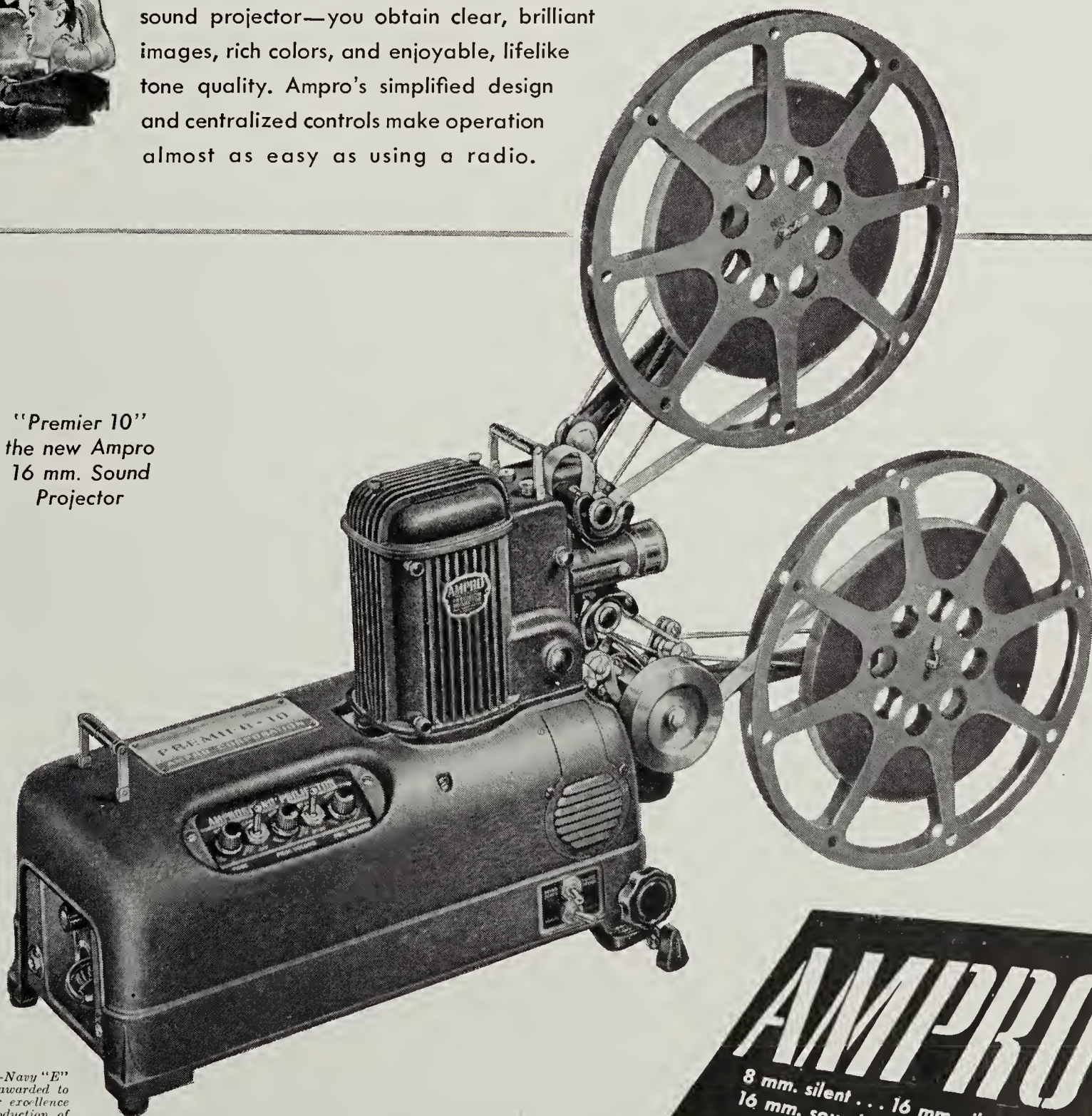


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nothing of the rich personality of Mexico mixed with its celluloid. From the purely technical aspect, it was a stylized showpiece, nothing more.

The recent Mexican film which we hold up in contrast is "Portrait of Maria", a superb bit of film-making now being released in the United States by M-G-M—International. This film, photographed against the picturesque background of Xochimilco, tells the simple story of two peasants trying to live peacefully in a community hostile to them. The sets are almost painfully simple—mostly exteriors with a few adobe huts, a church, and the water-traced foliage of the region in which it is set. These simple elements the cinematographer fashioned into a film composition that is truly poetic. The exteriors achieve a stunning realism—not of a harshly documentary type, but of a rich quality that may truthfully be called *rotogravure*. This result is due to the correct use of heavy filters, the capable placement of reflectors, and angles that enhance the natural pictorial quality of the backgrounds.

The interiors are similarly well-done. The cinematographer used spots of light, rim-lighting and low-key in a skillful duplication of source illumination. The result is artistic without being "glamorous", and again the accent is on realism.

"Portrait of Maria" represents a definite step forward for the Mexican film industry. It embodies a skillful blending of academic film technique with the more abstract qualities of personality that make our southern neighbors the warm, vibrant people that they are.

International Styles in Cinematography

(Continued from Page 117)

Mexico

position then another. As a result, the picture was a tedious affair, with a wealth of superb camerawork wasted as an end in itself, rather than contributing to the overall impact of the film.

The "reborn" French film industry is just now hitting its stride—and the first major release to play our local theatres is a fine piece of work titled "It Happened at the Inn" ("Goupi Mains Rouges"). This film, released in the United States by M-G-M—International, combines the usual French dramatic artistry with a much-improved camera technique. The locales of the film was very simple, rural settings—and it would have been a temptation to glamorize these relatively dull backgrounds. But the cinematographers on the picture used a style of lighting and camerawork that was in key with the subject and which, at the same time, went far beyond the starkly realistic type of camera treatment that used to characterize French films.

"It Happened at the Inn" is a smooth film, technically speaking. It may well be the keynote of the new French cinema, in that it achieves a happy medium between "art" and realism.

The Mexican motion picture industry has made great technical advances in the relatively short time that it has been established. Admittedly drawing knowledge, technicians, and inspiration from Hollywood, the studios south of the border are at last evolving a cinematic style embodying the technical finish of American films plus a quality of artistic approach which is particularly their own.

As an example, let us draw a comparison between two of the better Mexican films—one made several years ago, the other filmed quite recently.

When "La Dama de les Camellias" was released some time back, it was acclaimed by critics and audiences alike as an artistic achievement. Mexican reviewers took particular delight in saying that this film was "as good as anything ever produced in Hollywood". Whether or not this was actually the case is of no consequence. The important fact is that this film succeeded in copying and adapting the better Hollywood camera techniques, the very elements which (as we have said earlier) go to make up a style that is typically American. As a result, "La Dama de las Camellias", with its Hollywood approach, appeared on the screen as a very smooth film indeed. But it had

Russia

Since the motion picture in Russia is primarily an instrument of propaganda and secondarily a medium of entertainment, its emphasis has always been on the documentary approach. That emphasis remains the same today.

Sergei Eisenstein and Igor Pudovkin, Russia's two top masters of the cinema, have developed a style of adapting the documentary approach to the fictional photoplay in such a way as to tell a story and at the same time provide a basis for the introduction of social significance. This technique is uniquely tailored to the tastes of Russian theatre-goers who expect to be propagandized by their art forms.

It has resulted in a number of very unusual films: "Potemkin", "Ten Days that Shook the World", "Maxim Gorki", "Dr. Mamlock", and "Alexander Nevsky"—to mention a few. The photography in these films is so "realistic" that it appears almost to be newsreel footage. The spectator is led to believe that he is witnessing actual occurrences. This even applied to Eisenstein's stirring "Alexander Nevsky", a filmization of medieval warfare between Russian and Teutonic knights.

In his most recent production, "Ivan the Terrible," Eisenstein attempted to

(Continued on Page 145)

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Alaska Adventure

(Continued from Page 138)

spikes which formed convenient handles. After so abusing my Roliflex, it was a decrepid looking sight. But good stills meant more to me at that time and I had to resort to drastic measures.

"Another devise I was forced to rig up was a chest tripod with camera strap. As my main goal was to capture authentic, realistic portrayals of actual seal, whale and walrus hunts, I had to have some system of steadying the camera and carrying it on my person. When in a uniak (skin boat—seats 9 or 10) skimming over rough waters, it was impossible to hold camera steady without a brace. I needed a system whereby my camera would not be damaged bouncing around and whereby my hands and arms were free.

"On hunts I had to be on the alert every moment for one never knew when game we were seeking would appear among the ice floe. This chest tripod was a flat 6 inch square platform with an adjustable arm completely covered with seal skin. An attached strap (seal skin) went around my neck and was attached to another strap down my back and around my waist. The tripod in use rested high on my chest braced by the movable arm with neck strap holding it steady. When not in use it would lie flat against my body. The waist strap held my camera solid to my

stomach and relieved pressure from my neck.

"When running over shore ice which was broken up and sharp, it took all muscles and co-ordination to keep upright. One had to have complete freedom of movement. I couldn't employ my arms to hold equipment. I even had to learn how to throw my body when I fell so as to protect my camera. If I had not devised this 'homemade' invention, my camera would have been damaged beyond repair, my film lost in the drink and I'd probably have been shipped 'outside' in a driftwood box (pine not available). I think the latter thought motivated a hidden ingenuity.

"A few narrow escapes put me wise. One time I found myself and equipment floating out to sea on an independent island of ice which had broken off from the shore ice. If my native friend, Tokeinna, had not yelled a warning in time, the gap would have been too wide for me to load up my loose equipment and make the leap. Then and there I formulated my tripod and carrying system.

"After a few days I had adjusted my equipment and technique of shooting to the existing conditions. Of the three lenses I had, my 15mm F:2.5 proved to be ideal. I didn't have to bother with focusing as long as I didn't move in closer than 10 feet to my subject. I was never able in action shots to move in closer than 10 feet because the Eski-

mos have a wild way of weilding knives when butchering their kill. Many times I was knocked down, pushed or stepped on by hunters too busy to watch out for me. This lens proved satisfactory for medium and distant shots. I could take fast action and impromptu shots with the assurance that everything would be in focus and all I need worry about was my aperture settings. I usually took one standard light reading and then, on forthcoming shots, was able to judge light almost to an F: stop.

"At first I found my exposure meter would not give me correct readings. The extreme glare and unusual light conditions which existed demanded a meter with a light cover over the photo-electric cell. Also an acetinic ray which exists in certain latitudes affected readings. My meter normally takes in a 30 degree angle of light and the 15mm F:2.5 lens takes in a 30 degree angle. I blotted over half of the photo-electric cell with adhesive tape to cut down the intake. I realized the use of an exposure meter must be governed by experience and judgment. It could only serve as a guide.

"Often times on hunts when sudden action occurred, in my excitement I failed to remove my rubber lens cap which protected the lens from snow. This seems to be a common tragic failing with most photographers—amateurs and pros alike. I couldn't afford such negligence with such a small supply of film. I attached a string to the center of the cap, stretched it across front of the view-finder and secured it to the skin cover. On looking through view-finder, the string would obstruct my view and remind me to remove the lens cap. Also with this attachment, I need not carry caps in my pockets to gather dirt or be lost.

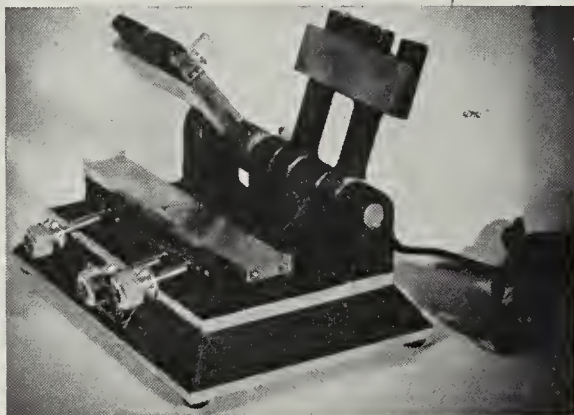
"Special care must be taken in loading and unloading motion picture camera film. I found it a tough proposition. Try changing film in sub-zero weather with gloves on. It took patience and lots of practice. Cold film should never be brought into a warm room for loading since moisture may condense out of the air. If subjected to below freezing temperature with condensation on film, the condensation will freeze causing film to stick and tear. At about -20°F a possible loss of film speed of approximately 50% may be anticipated. However the various classes of film are different at low temperatures and if possible, test exposure should be made. (When loading outdoors either the wind would blow so hard it would practically whip film from my hands, or the fine snow would sift into open parts. Tokeinna would make a shield with his extra parka under which I'd load camera by the blind "feel and peek" method. Until I became adept at loading with gloves on, I used my bare hands, for it is an exacting and intricate process. My warm, moist hands on contact with cold film gate would form a thin sheet of ice. I carried wooden matches con-

(Continued on Page 148)

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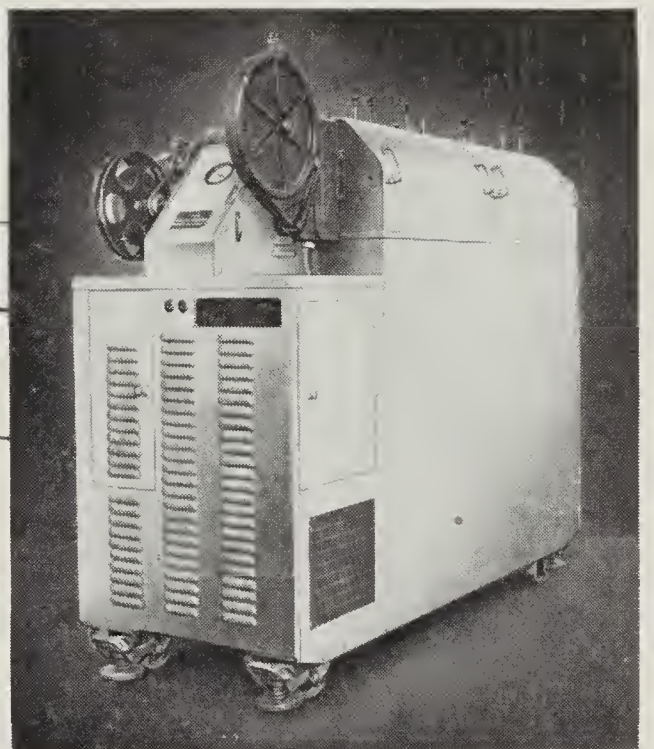
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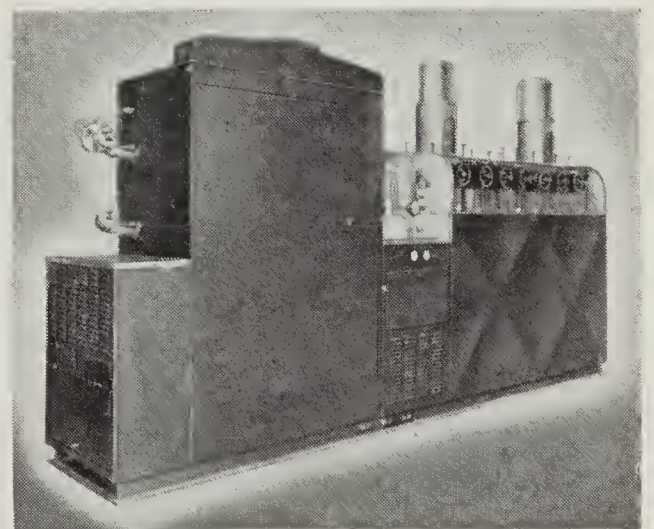
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Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, A. S. C. Directors of Photography are assigned to the following feature productions currently shooting in the various Hollywood studios:

Columbia Studios

Joseph Walker, "The Al Jolson Story," Technicolor.

Burnett Guffey, "Gallant Journey," with Glenn Ford, Janet Blair, Henry Travers, Charles Ruggles.

George Meehan, Jr., "Power of Attorney," with Forrest Tucker, Lynn Merrick.

Phil Tannura, "The Return of Rusty," with Ted Donaldson, Mark Dennis.

Rudy Mate, "Down to Earth," Technicolor, with Rita Hayworth, Larry Parks, Marc Platt, Edward Everett Horton, James Gleason.

Henry Freulich, "The Coffin," with Karen Morley, Jim Bannon.

Charles Lawton, Jr., "Blondie Knows Best," with Penny Singleton, Arthur Lake, Danny Mummert.

International Pictures

Milton Krasner, "The Dark Mirror," starring Olivia de Havilland, Lew Ayres, Thomas Mitchell.

Metro-Goldwyn-Mayer

Charles Rosher, "Fiesta," Technicolor, with Esther Williams and John Carroll.

Harry Stradling, "Till the Clouds Roll By," Technicolor, with Judy Garland, Robert Walker, Frank Sinatra.

Karl Freund, "You Were There," starring Katherine Hepburn and Robert Taylor.

Robert Planck, "The Show-Off," with Red Skelton, Marian Maxwell, Marjorie Main.

Robert Surtess, "Tenth Avenue Angel," with Margaret O'Brien, Phyllis Thaxter, George Murphy.

Harold Rosson, "My Brother Who Talked to Horses," Peter Lawford, Beverly Tyler, Butch Jenkins.

Joe Ruttenberg, "A Woman of My Own," starring Greer Garson and Robert Montgomery.

Monogram

Ira Morgan, "Freddie Steps Out," with Freddie Stewart, June Preisser, Frankie Darro, Jackie Moran.

William Sickner, "Corpus Delicti," with Sidney Toler, Sen Yung, Tanis Chandler.

Harry Neumann, Untitled Cisco Kid feature, starring Gilbert Roland.

United Artists

James Van Trees, "Angel On My Shoulder" (Premier Prod.), with Paul Muni, Anne Baxter, Claude Rains, Onslow Stevens.

Karl Struss, "Mr. Ace and the Queen" (Tivoli Prod.), with George Raft, Sylvia Sydney, Sid Silvers.

Theodor Sparkuhl, "The Bachelor's Daughters" (Andrew Stone Prod.), with Gail Russell, Claire Trevor, Ann Dvorak, Adolphe Menjou, Billie Burke.

(Continued on Page 146)

International Styles

(Continued from Page 140)

"go Hollywood"—and the result was somewhat unfortunate. While the camerawork in this film is smooth and at times quite striking, the usual force of Russian approach is missing. A weak compromise was made between stunningly-lit compositions and the more frankly virile style that we have come to associate with Russian cinema.

With their command of the documentary approach, it was second nature for Russian cinematographers to produce grimly realistic film records of the war. So adept are the Russians in applying this style of film-making, that it is difficult to tell where fact leaves off and fiction begins. They are masters in their own field.

In Other Lands

Several nations with smaller film industries have in the past, and will in the future contribute much to the fund of outstanding foreign films.

Switzerland has taken the first step in sending us its top-notch production, "The Last Chance," another local M-G-M—International release. The quality of cinematography in this film is first-rate. Photographed mainly in actual locales, it has an atmosphere of complete authenticity: the night scenes, for instance, really look as if they were shot at night; the blizzard in the mountain is a *real* blizzard, not bleached corn flakes and wind machines. The camerawork is straightforward, with only occasional lapses into "arty" moods, such as when the cinematographer could not resist the temptation to shoot a sequence through banks of waving weeds.

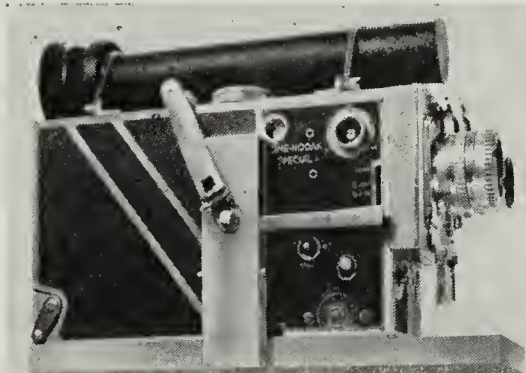
Czechoslovakia has in the past shown signs of establishing a place for itself cinematically. Some years ago in Prague, a film was made titled "Sympathy of Love." It was extremely artistic, fairly bursting with symbolism, and utilized some really beautiful camera approaches. The film carted off all of the international cinema awards for that year and was embraced by all of Europe as an artistic triumph. That same picture was later released in this country under the sensational title, "Ecstasy"—and achieved fame amounting to notoriety chiefly because of its nude bathing scenes. The symbolism was completely lost on American audiences—but a young lady splashing about *au naturel* was something they could readily appreciate.

Seriously speaking, though, Czech film producers have always revealed a real flair for cinematic style, and it is hoped that we may see more of their outstanding films over here in the future.

The Swedish film industry, also, has shown real promise in the past years. Films such as the original version of "Intermezzo" revealed a cinematic style that smoothly blended the nuances of gentle beauty with the fire of dramatic situations. The better Swedish films will deserve wider circulation in America.

In these days when understanding of our world neighbors is so vital, the inter-

national cinema can become a potent medium of orientation. It is encouraging to note that foreign countries are putting the best they have into their films. This means that we may look forward to more and better foreign films, as well as a more harmonious understanding between nations.



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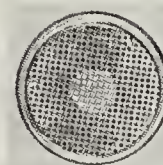
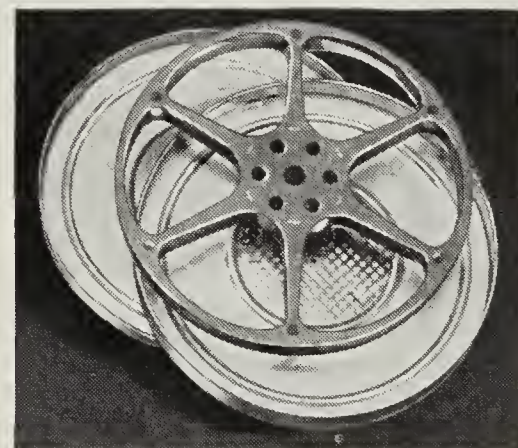
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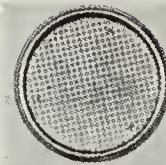
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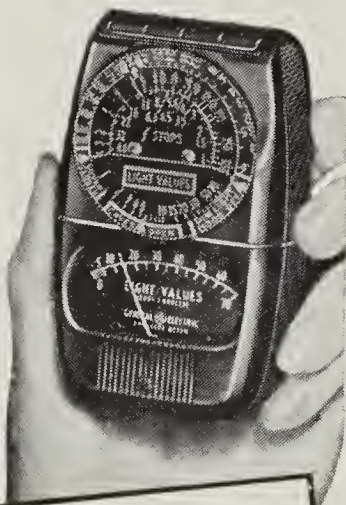
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Current Assignments of A.S.C. Members

(Continued from Page 144)

Universal Studios

Hal Mohr, "Fandango," Technicolor, with Yvonne De Carlo, Brian Donlevy, Jean Pierre Aumont, Eve Arden.

Joseph Valentine, "Lesson in Love," with George Brent, Lucille Ball, Vera Zorina, Charles Winninger.

Charles Van Enger, "The Ghost Steps Out," starring Bud Abbott and Lou Cos-

tello, with Marjorie Reynolds, Binnie Barnes.

Paul Ivano, "Kelly Is My Name," with Phil Terry, Ann Savage, Allen Jenkins.

George Robinson, "The Runaround," with Rod Cameron, Ella Raines, Broderick Crawford, Frank McHugh.

Warner Brothers

Ernest Haller, "Humoresque," starring Joan Crawford and John Garfield, with Oscar Levant, Ruth Nelson, J. Carroll Naish.

James Wong Howe, "The Sentence," starring Ann Sheridan, with Kent Smith, Robert Alda, Bruce Bennett.

Ted McCord, "A Very Rich Man," with Sydney Greenstreet, Martha Vickers, Dane Clark, Alan Hale.

Sol Polito, "Cloak and Dagger" (United States Pictures), starring Gary Cooper, with Lilli Palmer, James Flavin.

Sid Hickox, "Cheyenne," with Dennis Morgan, Jane Wyman, Bruce Bennett, Panis Paige.

Paramount

Lionel Linden, "O. S. S.," with Alan Ladd, Geraldine Fitzgerald, Patric Knowles.

Daniel Fapp, "Suddenly It's Spring," starring Fred MacMurray and Paulette Goddard.

Ray Rennahan, "Perils of Pauline," Technicolor, starring Betty Hutton, with John Lund, William Demarest, Billy De Wolfe, Constance Collier.

William Mellor, "Welcome Stranger," starring Bing Crosby with Barry Fitzgerald and Joan Caulfield.

Jack Greenhalgh, "Seven Were Saved," (Pine-Thomas Prod.) with Richard Denning, Catherine Craig, Russell Hayden.

20th Century-Fox

Charles Clarke, "Margie," Technicolor, with Jeanne Crain, Alan Young, Glenn Langan, Lynn Bari, Hatty McDaniels, Esther Dale.

Joseph La Shelle, "Claudia and David," with Dorothy McGuire, Robert Young, John Sutton, Rose Hobart, Gail Patrick, Harry Davenport.

Leon Shamroy, "Forever Amber," Technicolor, with Peggy Cummins, Cornel Wilde, Vincent Price.

John Seitz, "Home Sweet Homicide,"

(Continued on Next Page)

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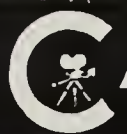
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Frank Redman, "Criminal Court," with Tom Conway, Martha O'Driscoll, Robert Armstrong, June Clayworth.

Nick Musuraca, "What Nancy Wanted," with Laraine Day, Brian Aherne, Robert Mitchum, Fay Helm.

Edward Cronjager, "Honeymoon," with Shirley Temple, Guy Madison, Franchot Tone.

RKO Studios

Leo Tover, "Desirable Woman," with Joan Bennett, Robert Ryan, Charles Bickford, Virginia Huston.

Roy Hunt, "A Likely Story," with Bill Williams, Barbara Hale.

George Barnes, "Sinbad the Sailor," Technicolor, with Douglas Fairbanks, Jr., Maureen O'Hara, Walter Slezak.

Jack MacKenzie, "Child of Divorce," with Sharyn Moffett, Regis Toomey, Madge Meredith, Walter Reed.

Telefilm Establishes Four Race-Filming Units

Telefilm Control method of photographing horse races via 16mm. is rapidly being adapted by virtually all the major tracks in the United States; following successful operations at the Hollywood Park and Santa Anita tracks in the Los Angeles area. To service already signed for Telefilm Control filmings, president Joseph A. Thomas announces that the company is organizing four crews of 15 men each for routing to the various race meets.

MGM Foreign 16mm. Reps Get Ampro Training

Foreign representatives of Metro-Goldwyn-Mayer who will have supervision of 16 mm. expansion of that company in their respective countries, are being put through an intensive course of training at the Ampro plant in Chicago. In addition to obtaining details of the manufacture of 16 mm. sound projectors at Ampro and other factories making such equipment, the MGM representatives become familiar with servicing and repair of such equipment, and are taught the requisites of the best 16 mm. projection techniques.

Hines Heads Telefilm Still Dept.

Harvey S. Hines has been appointed head of still department of Telefilm Studios, replacing Charles Lane who held the post the past 18 months.

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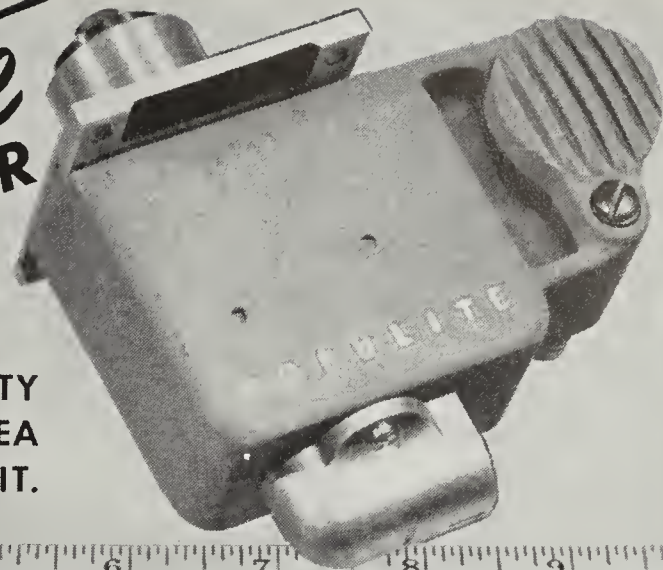
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Alaska Adventure

(Continued from Page 142)

stantly to scrape this off and to dislodge any celluloid residue which would scratch the film.) These precautions must be heeded to obtain perfect results.

"However, there was one rule I couldn't adhere to. When loading or unloading film under normal or subdued light, a photographer should always al-

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low a film waste of 4 to 6 feet at both ends of film roll. There were times when I had to load and unload without any "improvised" loading bags and with the extreme light and glare, I operated under, I should have allowed a waste of 8 to 10 feet. But I had to utilize every foot of film in my limited and dwindling supply. Also, invariably unusual and dramatic action seemed to occur just at the time my roll was almost shot up. I couldn't let these 'never to be repeated scenes' pass so I would keep shooting. As a result, some scenes in my picture have the red fog from light seepage, but I had no choice as I couldn't alter existing conditions.

"In these adjusting processes, the phases of which I've outlined, a few of my scenes were over and under shot. As I am a "4 W pro" myself, I knew what the outcome would be. Being unable to take repeat shots and test exposures, I had to be content with the results.

"My advice to photographers who have a yen for seeking unusual subject matter in unknown, far away lands would be:

'Take plenty of time and thought in the selection of your equipment, keeping in mind the conditions under which you will be operating.'

'Complete a thorough research of existing conditions beforehand, so as to prepare equipment accordingly.'

'Unanticipated conditions will arise that may stump you and the standard rules of photography cannot be employed. You can find a solution no matter how crude, even if it means abusing your camera. You're after a picture. Get it.'

The photography in Mr. Shankel's picture has been termed by professionals as "excellent". He is a pioneer in photography under primitive conditions. No risk was too great and no obstacle unsurmountable in the attaining of his picture. It is of high educational value—as well as entertaining.

He is well versed on Eskimo psychology and can be spoken of as a humanitarian. During the year he lived among the Eskimos, he gradually was accepted as one of them. He understands and respects these people. His lectures enlighten and erase misconstruities formulated by false propaganda.

China's Wartime Films

(Continued from Page 120)

well known stars in dramatic plots. The difference was that in China, the primary audience was the soldiers in the field—to be reached by mobile projection units in the field—and the people in the villages who either were guerilla fighters at the particular moment, or might need to take up their rifles and knives at any moment. In fighting China, there were virtually no civilians, and the Army's dramatized propaganda films played a vital role in maintaining morale, stimulating patriotism, and unifying the many sectional peoples of China into the National effort.

Refuge During Bomb Raids

Stars, directors, technicians and laborers all lived and worked together in the Chungking studio. Deep tunnels



Han Chung-lang climaxed his wartime adventures by being the only Chinese Government photographer to cover the Jap surrender on the Missouri.

were dug into the rock of the hill and when the warning was received that Jap bombers were coming, every individual in the studio was responsible for carrying some specific piece of equipment into the shelter. Tons of precious negatives, studio records, chemicals, and other supplies—in addition to the studio's small hoard of raw stock, for instance—were packed into bamboo baskets and carried into the tunnels during every raid. The tunnels were wet and could only be maintained by constant pumping, so they could not be used for permanent storage of equipment and supplies.

The sharing of danger and hardships, and the necessity of dividing up the meager food and clothing available, brought about a very practical democracy in the studio. All the buildings were used also as dormitories; and at one time upwards of a thousand men,

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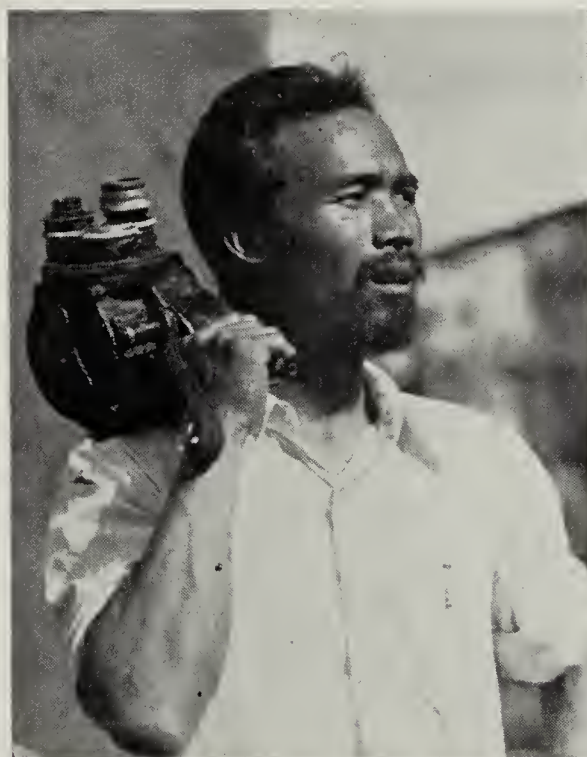
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women, and children were living and working in an area equivalent to about two American city blocks in the Chungking studio.

Jap Prisoners For Heavies

Cooperative effort had a rather amusing sidelight in the case of the Japanese prisoners. In Hollywood, films produced during the war, the necessary Japanese characters were impersonated by players ranging in race from Chinese to Norwegian. But for the Chinese soldier audiences, only Japanese soldiers would be convincing and acceptable in enemy roles. So the studio arranged to take over 100 Jap prisoners who had voluntarily surrendered or had become



Chang Chien-tai, whose camera recorded two highlights of the China-Jap war—Chinese victory at Tai Ur Chuang in 1938 and the final Jap surrender to the Chinese Central Government at Chikking.

converted to the Chinese viewpoint. These former enemy soldiers were then used in all closeup scenes of Jap combat.

They were given a substantial degree of freedom, helped with all the studio chores like the rest of the cast and crew, and took a tremendous pride in their work—portraying the ferocity of the Japanese invaders with such realism that the Chinese director often had to tone down the scenes. Near the end of the war, when the prisoner detachment was sent back to its concentration camp, a number of them filed applications for postwar employment in the Chinese studio.

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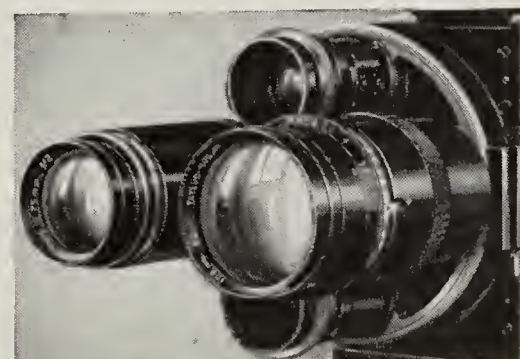
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Aces of the Camera

(Continued from Page 115)

era to his heart's content, bring his own photographic plates, take the picture himself, and even do his own developing. All this adds up to a most imposing array of precautions against the possibility of trickery, but trickery is perpetrated nevertheless.

When Conan Doyle was the subject the pictures had the image of his son on them. And the images were perfect! He was delighted.

"But I've tricked you," Jerry told him. "That's impossible!" Conan Doyle retorted. And Jerry never was able to convince the man that the so called spirit images were nothing but a clever trick photographer's best trick. So anxious was Doyle to believe that he refused all the evidence to the contrary and attributed Jerry's desire to enlighten him as mediumistic modesty.

How does Jerry do it? By using a well known principle of photography. That's all he had told any man—except the late Houdini.

Houdini was let in on the secret when that great magician was heading the Scientific American Expose Committee against fraudulent spiritualism. In his desire to safeguard a gullible and frequently grieving section of the public he wanted Jerry to permit him to expose the working of his camera in the public print. But Jerry said "No." He felt that advertising the way to do it would only put the tools of fraud into more hands. And anyway, no good magician gives away his best trick.

It is interesting to listen to the "behind-the-scenes" stories of magicians, and revealing to hear about the amazing ingenuity displayed by the master illusionists in inventing a trick and the tremendous patience they exhibit in learning to present it adroitly. No field of science is immune to their investigation and their research has sometimes anticipated the public knowledge of scientific principles; as for example the use

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of induction phones by a famous mind-reading act before the acceptance of radio.

Who has, or who had, the greatest magic act? Jerry can't decide, but he'll give you the highlights of them all. And he speaks with a reverent tone when he recalls Rameses, Herman the Great, Horace Golden, Selbit, De Beer and Cardini.

The mental acts, of course, interest him most, so we ventured to ask what he thought of Dunninger. "A great showman!" he replied. Yes. But a telepathist? "Absolutely not!" And that's from an expert. So, if you get into a discussion with your friends it might be a hook on which to hang an argument.

Jerry thinks one of the most entertaining mental acts was performed by Jimmy Eyester, who now confines his magic to hospital wards and to doing the neat trick of finding rooms for visitors to the Oakland hotel he successfully manages.

Because the work of Jerry Ash as a cameraman is so well known, we may

perhaps be forgiven for this deviation from the usual format by reporting this lesser known accomplishment. At Universal Studios, where he has been since 1915—and this might very well constitute a record of continuous employment for a cameraman—he is now in the Special Effects Department; having, through the years of growth of the motion picture industry, lensed everything from slap-stick comedies to the big features.

When the "King of Jazz" was made Jerry did what is perhaps the first trick work with a Technicolor camera. His current assignment, "The Ghost Steps Out," which has Charles Van Enger, A.S.C., as production cameraman, promises to reach the ultimate in trick photography in Technicolor. Fifty per cent of this picture will consist of trick work, on which Jerry is engaged under the able direction of Stanley Horsley, A.S.C., head of Universal's special effects department. It looks like a perfect opportunity for a master of the two arts to turn in a prize-winning performance. It looks like perfect casting.

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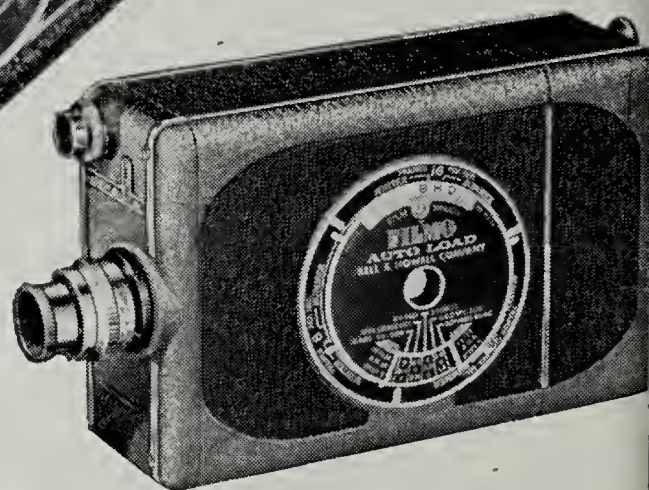
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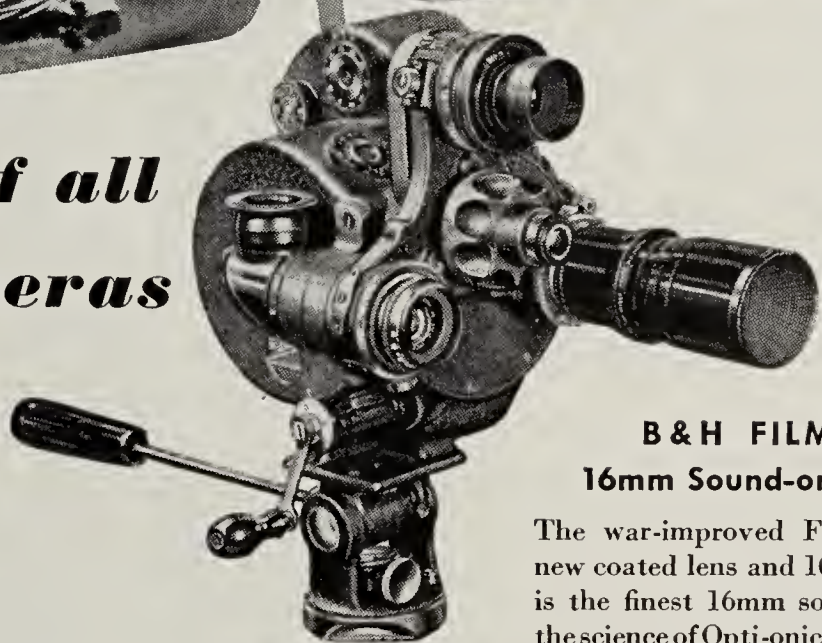


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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

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NO. 5

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ON THE FRONT COVER John Garfield and Joan Crawford go through final rehearsal for scene in Warner Brothers production of "Humoresque." Director Jean Negulesco in checked shirt (center), and Director Photography Ernest Haller in light suit beside camera make their final checks before the cameras roll.



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ACES of the CAMERA

ROBERT PITTACK, A. S. C.

By W. G. C. BOCO



AS THIS is written the finishing touches are being put to a motion picture that all Hollywood is eagerly waiting to see. It is a picture that has received very little advance publicity, and, amidst the welter of press releases turned out to whet the collective appetite for the usual celluloid offerings, has progressed through several months of shooting and editing unheralded and almost unnoticed.

The reason Hollywood has cocked an eye in pleasurable anticipation at this

particular film is that it represents the efforts, for the first time as writer-producer-director, as one whom many believed to be touched by genius; and stars one of filmdom's fabulous personalities of an earlier era, a man who made motion picture history; and who has chosen this particular vehicle to stage a comeback.

The title of the picture, "The Sin of Harold Diddlebock"; written, produced and directed by Preston Sturges. The star, Harold Lloyd. And the man en-

trusted with the job of putting this distinguished production on film, Robert Pittack, A. S. C.

Bob Pittack considers it a stroke of great good fortune to have been chosen by Preston Sturges to film that worthy's first independent production, and he looks back upon this recent experience as one of the highlights of his career as a cameraman.

It was inspirational, he says, to work with two men of such consummate skill; one directing, with deft touches, the sparkling dialogue and clever situations in a script he himself wrote and of a type he has already made famous; the other, an acknowledged master of comedy in all its ramifications, contributing prodigiously from his vast experience.

It is a pleasure, Bob goes on to say, to work with a director like Sturges. His attention to camera detail is enormous and he has a highly developed understanding of the cinematic medium. He knows exactly what he wants and will go to any amount of trouble to get it. When "The Sin of Harold Diddlebock" hits the screens, Bob is sure that it will permanently establish the brilliant and versatile Sturges as one of the indisputably talented writer-producer-directors of this era, and re-establish the one and only Harold Lloyd with his old public as well as with a new generation of moviegoers to whom the name of the famous comedian is only a legend.

Mr. Sturges, who "knows what he wants," showed excellent judgment in selecting a cameraman with the patience for taking infinite pains, of great technical skill based on a clear understanding of his job, and with a sincere approach to his work; a man whose background reflects the experience of 27 years of movie-making.

This experience began in 1919 when Bob Pittack first came to Hollywood. He was on a visit from Seattle at the time and had no intention of staying. But he owned a car, and someone offered him a job as an assistant cameraman.

It wasn't everyone who had a car in those days, and the possession of one by Bob made him a most desirable camera assistant. Universal grabbed him and his car and put him to work under Bill Edmonds. With a salary of \$20.00 per week and rental for his car Bob was probably the highest paid assistant cameraman in Hollywood at the time.

Bob decided he liked the picture business. When Edmonds left Universal to go to work for Robertson and Cole at the Lois Weber Studios at Santa Monica Boulevard and Vermont Avenue, Bob went with him. Under that banner they photographed Pauline Frederick's starring vehicles.

But it was on his next move, to Famous-Players-Lasky, that he began to get the intensive training which is the necessary background for all those who would become Aces of the Camera.

At Famous-Players-Lasky Bob came under the supervision of Karl Brown, a

(Continued on Page 183)

PSYCHOLOGY and the SCREEN

By HERB A. LIGHTMAN

WE are prone to think of film production as a blending of mechanical and creative arts. It is surely all of that, but there is something more that goes into the making of a successful film—an intangible essence that reaches out to filmgoers and makes them laugh or cry, cheer the hero, hiss the villain (*sub-consciously*, at least). It is something you cannot put your finger on, but it must be present if an audience is to react appreciatively to a motion picture. This abstract force is based upon an understanding of people and their actions, how they think and react, why they do what they do. We have come to know it by the name *psychology*.

Once a step-child in the realm of pseudo-science, psychology has in this century reached scientific maturity and has incidentally become an integral element of motion picture-making. Star names, smooth production, lavish sets

are no longer sufficient to guarantee the success of a film. The novelty of lavishness has worn thin, and producers now realize that they must give an audience something it can "sink its teeth into," a story of substantial fabric based on sound psychology. This is especially significant in view of the fact that film audiences, especially in America, do not go to motion picture theaters to *think*. Rather, they go with the expectation of taking part in a vicarious emotional experience. As a result, our cinema appeals not to the *intellect*, but to the *emotions*.

Film production consists of many varied elements: script, camera, direction, sound, music, editing, etc. We may visualize the film itself as a *symphony* with all of these elements as instruments playing together to produce a harmonious dramatic pattern, and balanced to extract certain empathic responses from

the audience. The point of balance is often exceedingly fine. Sometimes in the midst of a tensely dramatic scene an audience will begin to laugh for no apparent reason. This inappropriate reaction can always be traced to faulty psychology in some phase of production. That is why intelligent (and successful) producers now plan their productions with careful attention to correct psychological approach.

Psychology applied to the screen acts as a kind of "sixth sense." The audience should react to it without being conscious of the machinery behind the scenes. Also, if too frequently used, psychological touches tend to lose their effectiveness. "Citizen Kane," directed by Orson Welles and strikingly photographed by Gregg Toland, A. S. C., is technically one of the finest pictures ever made. Violating all rules of cinematic convention, it introduced many original techniques to the screen and leaned heavily on psychological approaches to gain audience reaction. However, there were sequences when too many of these devices were used at the same time, vying for audience-attention in such a way as to cloud the dramatic issues presented. Too much of a good thing weakened the impact of an otherwise masterful film.

Association of ideas plays an important part in stimulating audience reaction. Each member of an audience will tend to associate certain phases of the photoplay with episodes out of his own experience, and will then accept the various ideas and stimuli that follow, reacting to them and experiencing a state of suspense concerning the outcome of separate sequences and the film as a whole.

Most really effective films are conceived in an overall key that applies to all phases of production, thus achieving "mood" that is unified and consistent. In "A Tree Grows in Brooklyn" every mechanical and dramatic technique was keyed to present a picture of harshly realistic tenement poverty softened by family affection. The camera treatment bordered on the documentary, direction and action were kept simple, and the settings were authentically "Brooklyn"—not merely a designer's version of what Brooklyn must be like.

It is the sustaining of strong mood that holds an audience firmly in grasp and leads it to accept a pattern of facts which, if presented singly, would not be credible. Generally inept handling of these values in the past has resulted in a common American aversion to motion picture themes based on fantasy. And yet, Americans are basically an imagi-



"The Stranger" makes excellent use of silhouette and shadow in maintaining deep psychological mood. The film is also notable for its kinetic application of sound to the visual image.

native people and will accept well-presented fantasy of the type featured in "On Borrowed Time" and "All That Money Can Buy." Both of these films had allegorical themes. The first personified Death in the form of a mild-mannered but insistent gentleman known as "Mr. Brink"; the second represented the Devil as a rustic tongue-in-cheek rogue named "Mr. Scratch." Both characters were believable, and both films were highly entertaining because *mood* and *key* had been carefully established to appeal psychologically to the audience's imagination.

Cinematic symbolism is a psychological device that is most generally wasted on American audiences. European film-makers delight in showing wind-swept fields and flashes of lightning to symbolize clashes of emotion. It has become a *cliché* to show waves dashing against a rocky shore in order to represent the release of human passions. Such symbolism is either too farfetched or downright melodramatic and American audiences much prefer the more direct approach. However, symbolism has been used in a few cases with potent effect. In "The Letter," for instance, the murderous tension of the main character was symbolized by repeatedly intercutting a striking shot of a full, evil tropic moon soaring through ominous clouds.

The current cycle of films based on psychological themes has brought the subject itself very much to the fore. "Spellbound," one of the better pictures that has been made on the subject, owes its success as absorbingly adult entertainment to the fine teamwork of a set of unusually talented creative technicians. Producer David O. Selznick, scenarist Ben Hecht, director Alfred Hitchcock, and cinematographer George Barnes, A.S.C., all worked together in the same key to produce a highly artistic and thrilling motion picture. "The Seventh Veil," a British film, based on psychoanalysis also shows superb handling of this abstract subject.

We have compared the motion picture to a symphony, and in keeping with this simile the shooting script becomes a *score* or *orchestration*, as well as a working blueprint of the psychology to be used in interpreting the story—for it is in the script that the little "touches" originate, the subtleties to which an audience reacts. Human struggle or *conflict* is one of the requisites of an effective script. Even a comedy screenplay involves certain set-backs and clashes between protagonist and antagonist, because without this element the screen story would lack force and an audience would soon tire of a series of events unfolding too smoothly. Conflict may not necessarily be between man and man. On the contrary, several outstanding films ("The Hurricane," "San Francisco," etc.) have been based on struggle between man and the elements. Occasionally, as in the film "Gilda," a character even battles it out with his own conscience. But struggle amounting to *dramatic conflict*, no matter what form

it may take, is one of the essential factors in stimulating audience reaction.

Due to a mental process known to psychologists as *projection*, members of an audience tend to project themselves imaginatively into situations portrayed on the screen, even identifying themselves with specific characters. This mental process works in favor of the film-maker whose object, as we have pointed out, is to draw an emphatic response from the audience. Working on this premise, then—if, in addition to the plot action in the film, scenes are intercut showing the reactions of various characters to that action, the audience will tend to react in the same way and will be drawn more closely into the mood of the story. Therefore *reaction shots* are a valuable scenario device.

The technician most responsible for psychology applied or misapplied to the motion picture is, of course, the director. He is the *conductor* of our cinematic symphony. He is the one responsible for the careful blending of all the elements that go to make up the produc-

tion. Certain directors, such as William Wyler, John Ford, Alfred Hitchcock, and Billy Wilder, are especially adept at applying psychology to film. They seem to know how and when to "hit" an audience. Hitchcock, especially, has the emotion of *suspense* down to a science. He knows how to build up a situation and just how long to hold his audience on tenterhooks before releasing a crashing climax. He knows how to apply little psychological tricks so that the audience-mind will not stray from the action of the film.

Directors who are most skillful in the use of psychological approach invariably stage action with a good deal of restraint, realizing that (having been given the proper stimulus) an audience's imagination will fill in emotional details more powerful than any that could possibly be presented on a sound stage. This psychology carries over to the players as well. Most of the truly great individual dramatic performances on the screen have been underplayed

(Continued on Page 178)



"Spellbound," based on a psychological theme, is an example of perfect technical teamwork, with every element of production psychologically slanted in the same key.

World-Wide Celebration Planned On 20th Anniversary of Sound Films

WARNER BROS. Pictures, Inc., will co-sponsor with a number of other American companies and scientific leaders, the twentieth anniversary of the practical use of talking motion pictures for theatrical use. Anniversary program will continue over a period of four months, winding up on August 6, 1946; latter being the twentieth anniversary of the date on which Warners, by arrangement with Western Electric Company and Bell Telephone Laboratories, presented the

first commercially successful showing of talking films.

Sponsoring the worldwide anniversary celebration in cooperation with Warners are: The Bell System — including the American Telephone and Telegraph Company, Western Electric Company, and Bell Telephone Laboratories; RCA-Victor Corporation; Thomas A. Edison, Inc.; and Eastman Kodak Company. Scientific interests will also be represented by the Society of Motion Picture Engineers, many of whose members are

responsible for the development of talking picture equipment and techniques now in international use.

Special Programs Honoring Scientists

Series of special programs, designed to focus attention on the importance of scientific development and cultural contribution of the talking films, and to honor the scientists who pioneered in the field, will continue on an international scale through the summer. Special ceremonies, both in the United States and abroad, will commemorate the important pioneering experiments by science and industry, and will highlight the contribution of the sound motion picture during the past two decades in the fields of entertainment, public service, and education. Culmination of the anniversary celebration on August 6th will finish with local celebrations in key cities of the United States, Canada, England, Australia, Latin and South America, South Africa, and all other countries where American motion pictures are now being shown.

Special Exhibits Planned

Among the events now being arranged by Warners and the co-sponsoring companies are: special exhibits of early communications and photographic equipment; national and international science and industry conferences on future development; educational forums on the applications of sound motion pictures in teaching arts and sciences, and on the use of sound film to promote international understanding. Special programs will be devised for theatres throughout the country.

Initial Vitaphone Showing

The talking motion picture as it is known today dates from the August 6, 1926, special Vitaphone program premiered at the old Warner Theatre in New York, in which recorded music and speech were synchronized with motion pictures. Prior to this showing, Warners —like other film producers—had been engaged in the production of silent pictures. It was a demonstration in 1925 of a talking picture device perfected by the Western Electric Company and Bell Telephone Laboratories which decided Warners to venture their entire financial resources in the development of the new medium, until then generally regarded with great skepticism by the film industry as a whole.

Edison's Pioneering

Although talking pictures were first presented successfully in 1926 to create a revolution in production technique, the scientific development of talking motion picture films traces its ancestry to the



Early model of sound mixing booth—unventilated and lined with sound-deadening materials. Similar and smaller booths originally housing cameras and camera staff in early days of sound production proved to be sweat boxes when doors were closed during shooting.

inventions of the late Thomas A. Edison; and the invention of the audion tube by Dr. Lee de Forest. In 1887 Edison wrote: "The idea occurred to me that it was possible to devise an instrument which should do for the eye what the phonograph did for the ear, and that—by a combination of the two—all motion and sound could be recorded and reproduced simultaneously."

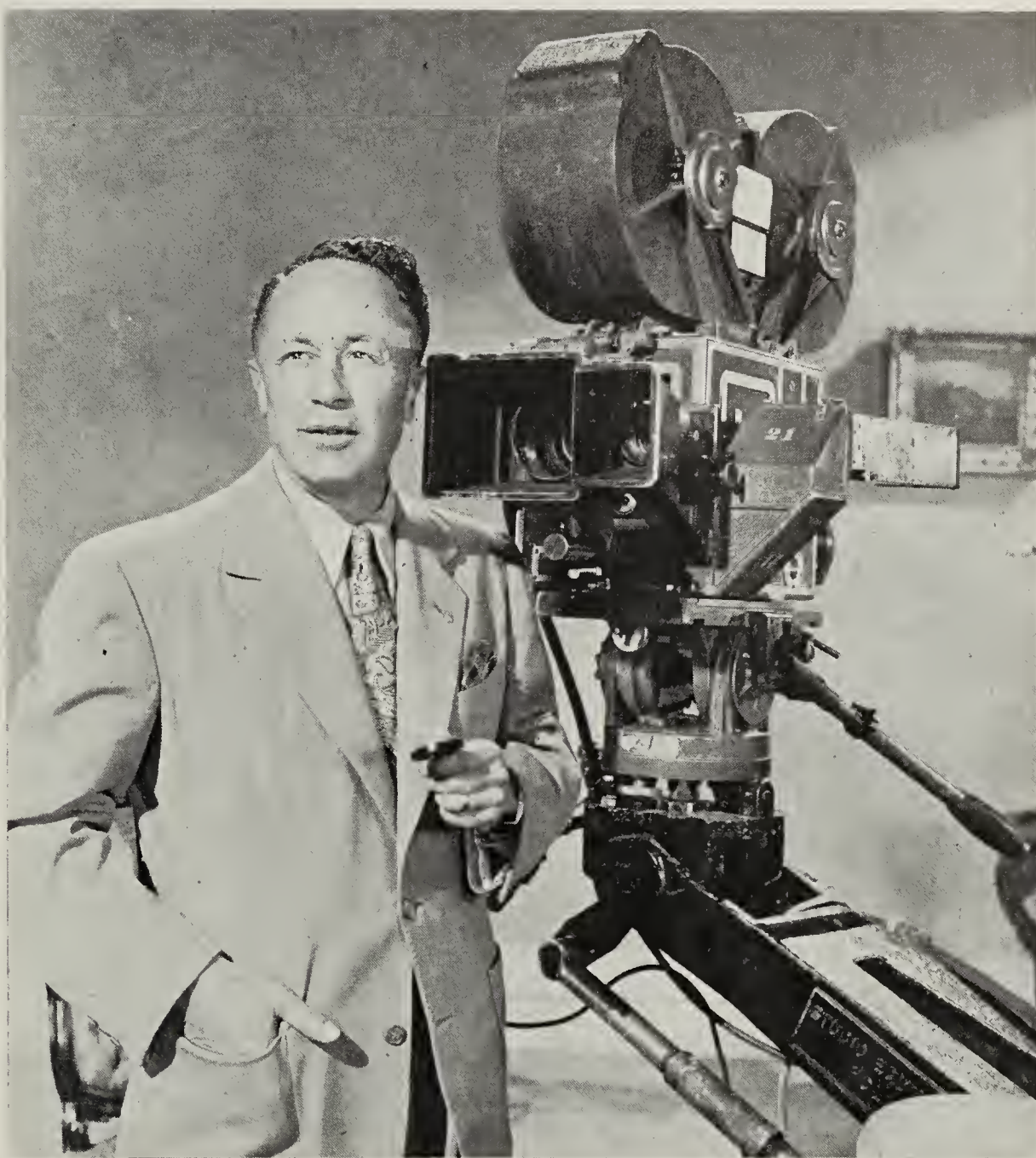
Two years later, Edison gave the first demonstration of a small motion picture, mechanically synchronized with a phonograph record. During the next dozen years, Edison had made nearly 20 brief motion picture subjects for the "kinetophone," as the Edison device was known, and these were shown in a number of theatres in various parts of the country.

De Forest's Important Contributions

De Forest developed a sound-on-film method of synchronizing sound with motion pictures, which he called "Phonofilm." Demonstrations of Phonofilm were given in de Forest's New York laboratory in 1921; which was followed by public exhibitions in the following two years in eastern theaters, including the Rivoli and Rialto theatres in New York City. At the time, however, leaders of the film industry refused to get excited about talking pictures as a replacement for the then-popular silent product.

Warners Adopt Western Electric Method

Culmination of those pioneering activities resulted in perfection of the finest talking picture technique available up to that time by Western Electric Company and Bell Telephone Laboratories—after a long period of intensive and expensive research. Although the silent films were at the height of development both technically and artistically, audience interest was noted to be



Peverell Marley, A.S.C. and one of the latest type of sound-proofed cameras being used at Warners.

tapering off in the theatres, and the Warner brothers were progressive enough to take the long shot that talking pictures would be the solution to reviving the waning box offices. Experimenting with the new medium, Warners soon developed the new technique and adapted it for practical production to the point that they were able to produce talking pictures successfully through use of the device perfected by Western Electric and Bell Laboratories.

Initial Showing in 1926

On August 6, 1926, at the then-known Warner Theatre, New York, the entire future of Warners was wrapped up in the first public showing of a complete program of talking and sound films were shown. Metropolitan Opera stars and outstanding concert artists sang and played before the audience, followed by the feature, "Don Juan," starring the late John Barrymore, with a fully synchronized and recorded musical score.

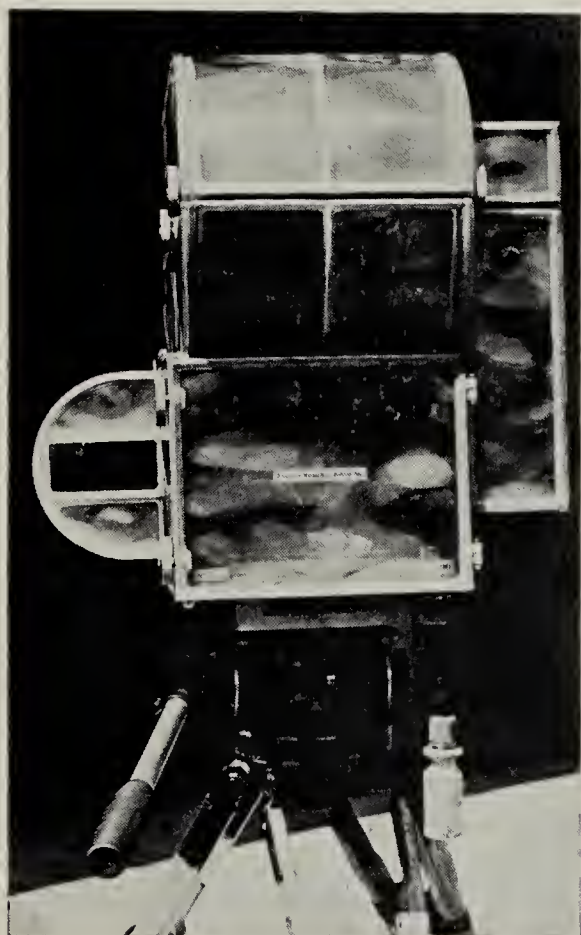
The Vitaphone premiere — although enthusiastically received by the New York public at the time — failed to jolt the complacency of other company executives, who considered the showing a passing fancy which could not disturb the even tenor of the film industry at that time. But Warners predicated their entire business future on talkers, and

were soon turning out features that generated terrific grosses in the relatively few theatres that had foresight enough to install the sound reproducing apparatus.

Bell Telephone Laboratories and Western Electric — continuing their development work — did important research in sound-on-film recording; while Radio Corporation of America likewise carried forward development of sound-on-film. Six months after the Warner premiere, William Fox and Theodore Case introduced the Movietone newsreel.

In the early Vitaphone period, Victor Talking Machine and Columbia Phonograph both made important contributions to the techniques of recording-on-discs; while Eastman Kodak and du Pont film division developed the means of adapting motion picture film to the requirements of sound-on-film recording.

Sponsors of the 20th anniversary of the introduction of commercially successful sound in motion pictures emphasize that—in addition to commemorating the achievements of the past—the event will be dedicated to the setting of new standards of accomplishment in motion picture sound recording for the future, in addition to opening of new horizons of public service by films and the motion picture industry.



An early type of blimp to deaden camera mechanism sound during shooting.

Survey of Current Processes of Color Kinematography in England

By JACK H. COOTE, F.R.P.S.

(The following address by Mr. Coote, Director of British Tricolour Process, Ltd. of London, delivered to the British Kinematograph Society on February 13, 1946, is particularly informative in detailing the present status of color motion picture cinematography in England. The address was originally printed in the March 1st, 1946, issue of the British Journal of Photography, and reprinted by permission.)

Recalling a review of color cinematography by Dr. D. A. Spencer a decade ago, Mr. Coote stated: "Although the situation has not radically changed since then, rather more is now known about several processes which Dr. Spencer could only touch upon, because of their short history at that time. In addition, the intervening years largely eaten up by war, have resulted in a certain amount of confusion and uncertainty regarding

the true position and probable future of a number of current colour processes. Therefore, a discussion of the advantages and the disadvantages of most of the currently operated processes might be useful at this time, although any paper dealing with colour kinematography must necessarily leave many questions unanswered—time alone is capable of sifting colour processes into their true value and relationship.



Cabling the camera uphill—Olivia DeHavilland and Ray Milland start uphill on a walking shot for Paramount's "The Well-Groomed Bride." On the camera dolly, which moves up the hill on the wooden tracks specially laid down, are Director Sidney Lanfield, and Director of Photography John Seitz, A.S.C. Dolly on sidewalk behind pole carries the sound microphone boom.

"The whole field of colour kinematography can be divided into two parts if we deal separately with additive and subtractive processes, and since the only additive process which is at present available for commercial use is Dufaycolor, it will be convenient to discuss that process first of all. Any process which permits the use of an ordinary single film camera for colour photography, as does Dufaycolor, has an unquestionable advantage over one which requires the employment of a special colour camera, and the advantage is further increased if the same material can be satisfactorily exposed with a considerably lower level of illumination than that which is possible for subtractive processes. Yet these advantages can be outweighed by other considerations, and this is evidenced by the fact that some 90 percent of the colour which reaches the commercial screen is the result of photography with a 'beam-splitter' camera.

"Probably the difficulty which has weighed most heavily against the widespread use of the Dufaycolor process is the fact that a theatre with a screen illumination of 10 foot lamberts, which is the recommended Society of Motion Picture Engineers standard, will have an effective illumination of less than two foot lamberts when running Dufaycolor. The effect which the discrete filter elements of the Dufaycolor reseau have upon picture definition has been the subject of much discussion, but it is certain that the number of lines or elements per millimetre—which is at present 25—is less than the 40 or 50 lines per mm. which it is now usual to resolve in black and white prints made from negative materials such as Plus X.

"It might be thought that the high base density of 0.75, due as it is to individual filter elements, would seriously limit the quality of sound obtainable from any track printed on such material. However, Klein has claimed that in practice the output of the photo-electric cell is 70 percent of its normal and suggests that this somewhat surprising result is due to some form of 'stimulation' effect resulting from the constantly changing wavelengths to which the cell is exposed during the passage of the tri-colour filter elements past the slit. The effect is probably more readily explained by the fact that, despite their visual density of 0.75, all three of the colour filter elements will be highly transparent to infra-red rays, to which the usual type of photo-cell is most sensitive.

Technicolor—Advantages and Disadvantages

"The Technicolor process has been brought to such an advance state of tech-
(Continued on Page 184)

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HOLLYWOOD

THROUGH the EDITOR'S FINDER

FOR THE past 20 or more years, there has been a magic glamor connected with Hollywood and all phases of motion picture production and related subjects. The Better Business Bureau has continually cautioned the public outside of Hollywood against unscrupulous promoters of songwriting and "learn-to-write-film-scripts" schools which have carried the added bait of a Hollywood address to lure tuition fees from all parts of the world for correspondence courses which are claimed to instruct individuals sufficiently in motion picture production techniques for eventual lucrative incomes in the motion picture industry.

Because of the prominent part played by motion pictures in the war effort for all of the United Nations, in addition to the growing interest in every country for its own national film industry—even though such plans may eventually be devoted to documentary and instructional pictures produced by either the government or private enterprise—there may develop correspondence schools of instruction in cinematography and other related production and technical branches of film production. And it is entirely likely that such correspondence schools — because of the glamorous touch of a Hollywood address — may be established in the film capitol in order to more easily catch the attention of possible fee-paying students.

From a most intimate knowledge of the artistic and technical sides of film production, it might be pointed out that work in the studios and on film production — regardless of the department — is decidedly intense and exacting. There is little fame connected with production posts, and a lucrative income is dubious in contrast to the amount of time, energy, brain-power and labor necessary.

And—as any person who has dabbled in amateur photography or cinematography is well aware—a certain amount of information can be obtained from books and other printed words, but, in the last analysis, perfection in the art of photography finally comes from practical experience. There is no substitute for the latter, regardless of any claims to short-cuts that might be advanced.

So, at this time, it is well that we point out the possibilities of such promotion by various schools claiming to instruct in the basic fundamentals and finer points of cinematography or other technical phases of motion picture production, and that such courses should be thoroughly investigated by those interested to make certain that the home instruction to be given will be complete in basic fundamentals, and—more important—that the instructors are fully qualified by experience on actual film production in major Hollywood studios to impart the proper information to the subscribers to such a course.

ALTHOUGH certain secrecy surrounded the project — mainly to prevent either too great anticipation of early installation or rabid opposition—it is pertinent at this time to give a brief explanation of the experiments being conducted by 20th Century-Fox on the 50 mm. width film size for possible standardization in the large de luxe theatres. Let it be stated definitely that —before such a new film size be adopted —much time and effort is necessary for research and ironing out of new techniques required; and it will be several years before the initial feature film would be made for release in the theatres.

The experimental enterprise being conducted by 20th-Fox is designed to accentuate the photographic and sound qualities of pictures of the future for the new theatres planned for construction during the next several years by the major circuits. Main purpose seems to be to allow for a wider sound track on the positive prints in order to accommodate the stereophonic-type of three track sound as developed originally by Western Electric; which allows each sound track to be channelled to corresponding left, center, and right horn reproducers behind the theatre screen for realistic third dimensional sound effect. In retaining present frame height of 35 mm. size, the 50 mm. width will allow for a wider camera and projector aperture of approximately 50 per cent.

Such a wider scope for the camera will naturally entail plenty of experimentation on new and radical photographic techniques. But the expert studio cinematographers — as in the past — will capably solve the problem in their specific field.

UNION PACIFIC, which was one of the first railroads to utilize 16 mm. kodachrome for display of the scenic wonders of the territory it covers, currently announces a photographic contest which is certain to attract numerous camera enthusiasts to the designated locations of Zion, Bryce, and north rim Grand Canyon National Parks in Utah and Arizona. It's a splendid idea of the picture-conscious UP officials, and certain to be duplicated by other railroads, travel agencies and vacation spots.

In addition to substantial cash prizes for 8mm. and 16mm. movies in either black-and-white or color; there are divisions especially for black-and-white photos and color transparencies or prints. Pictures to be submitted are to be taken in the designated National Parks between June 1 and October 1.

For the benefit of program chairmen of amateur cinema clubs, it might be pointed out that Union Pacific produced a beautiful travel film in 16mm. kodachrome of the area open for the contest

under title of "Nature's Art Gallery," which might be booked for club meetings to provide members with an idea of the wide scope for movie making.

STATE of West Virginia is making a bid to attract amateur movie and photographic enthusiasts for vacation trips, and has set up a special photo information service for the benefit of film-making tourists. The service has been inaugurated by the State Industrial and Publicity Commission at the state capitol, Charleston, and will supply inquirers with information on districts holding natural photographic prospects, weather and seasons, sources of photographic supplies and finishing plants in the state, and travel information in general.

The plan as set up by West Virginia is just another indication of the progressiveness of states and other organizations in recognizing the promotional values of attracting camera enthusiasts for movie making.

RECENTLY announced order of ROPA will result in retail price tilt for new cameras, projectors, and most photographic accessories of eight or ten per cent over pre-war levels; in addition to the excise tax of about 18 per cent. Price increases were allowed to partially offset greater labor and material costs of the manufacturers. However, increase granted does not apply to film or used photographic materials.

There is no question but what the terrific interest generated during the war in all photographic activities will greatly expand the number of amateur movie enthusiasts from now on. In attracting new members and retaining the interest of beginners in club activities, it was suggested that clubs might set up a special 15 minute or half hour period either prior to or following the regular meeting, in which talks on fundamentals of photography and various types of equipment are given for the benefit of the new enthusiasts. It is certain that this procedure will be highly informative to the beginners, and speed their knowledge of fundamentals.

A number of the older amateur cine clubs continued the fundamental lectures or supplemental meetings on elemental and advanced cinematography during the war years for most beneficial results in retaining interest of the newer members. From reports seeping over the editorial desk, other clubs have either launched or resumed such activities for the novice members during the past few months. In several instances, the instructional meetings are held in between the regular monthly get-togethers; while in other cases, the informative sessions are staged either before or following the regular meetings.

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- 1 Bausch & Lomb Baltar 152 mm f 2.7 coated lens
- 1 Bausch & Lomb Baltar 35 mm f 2.3 coated lens

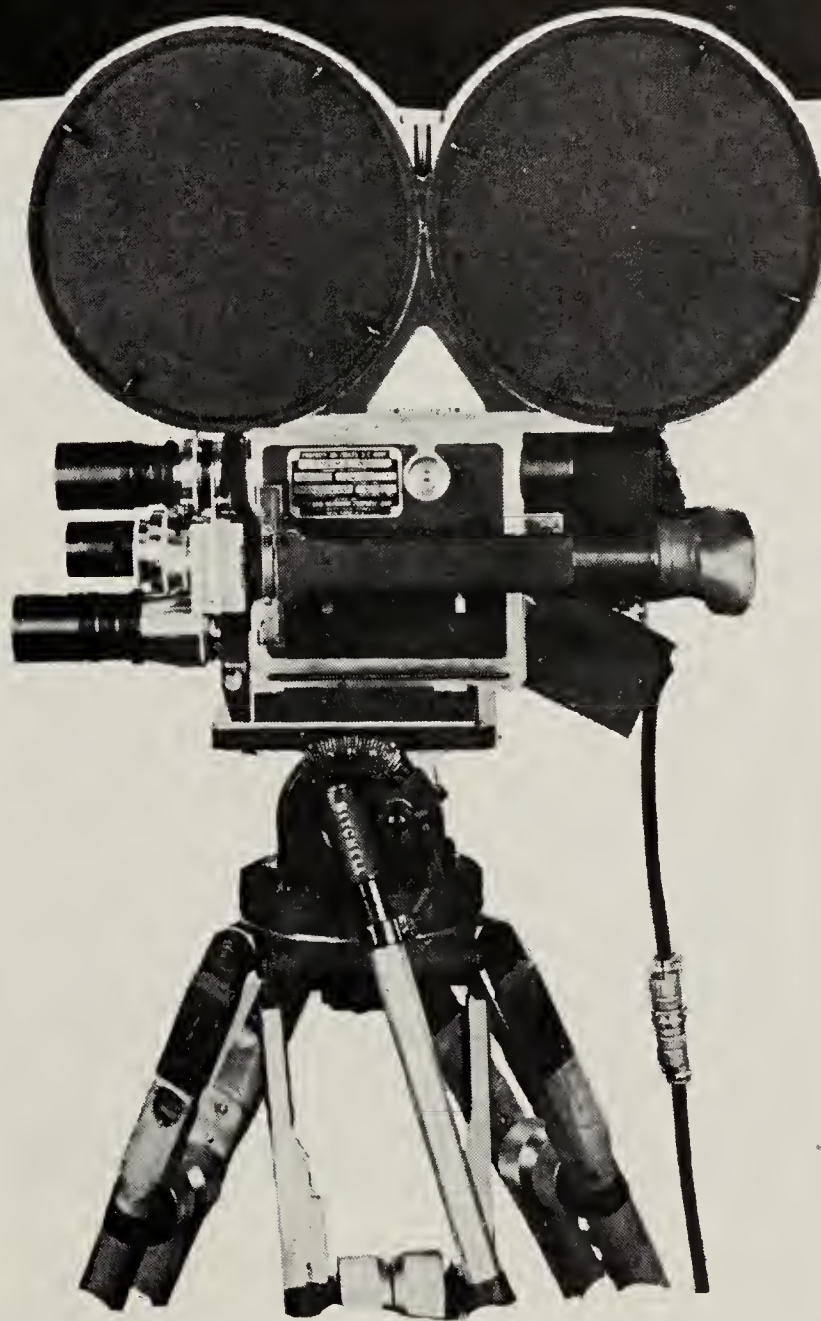
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Film Industry to Salute American Society of Cinematographers on 25th Anniversary Celebration at Cocoanut Grove, June 17

The Hollywood motion picture industry; including foremost stars, directors, studio heads, producers, executives and other artists; will celebrate the twenty-fifth anniversary celebration of the founding of the American Society of Cinematographers at a dinner dance to be held in the Cocoanut Grove of the Ambassador hotel, Los Angeles, on evening of June 17th, 1946.

The affair will be the first post-war event of its kind to be presented by the Hollywood production branch of the industry; and as an exclusive all-industry affair—will be attended by the top stars and personalities of the business.

Edgar Bergen, A.S.C., as chairman of the entertainment committee, is currently assembling a program comprising stellar screen and radio stars for appearances at the event—and the lineup is expected to surpass the best ever presented by Hollywood filmmites.

Schultheis Joins Telefilm

Herman Schultheis, previously with Walt Disney Productions and 20th Century-Fox, has joined Telefilm. He will devote his time to research and design of new precision equipment for improvement of sound and printing processes of 16mm. films.

Dunn Returns to Ansco

Robert M. Dunn has returned to his post of advertising manager of Ansco, following two years' service in the Navy. He will headquarter at company's New York offices, while Winthrop Davenport will continue in charge of the Binghamton department under Dunn's direction.

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Details of Bell & Howell Deal with Rank Interests Told

General details of the long-term agreement between Bell & Howell Co., makers of precision photographic equipment, and British Acoustic Films, Ltd., of England (engineering and manufacturing facility of the J. Arthur Rank group), are disclosed in an announcement by J. H. McNabb, president of B&H.

Under stipulations of the arrangement, a complete interchange of research as well as manufacture and distribution of equipment is effected between the two firms. All standard 35mm and substandard 16mm and 8mm Bell & Howell equipment, including sound and silent projectors, cameras, and slide projectors (as well as a wide range of accessories) will be made in England by British Acoustic Films Ltd., whose plants will be operated in strict accord with Bell & Howell engineering and production methods. Technical "know-how" for this project will be afforded by E. C. Johnson, veteran Bell & Howell engineer, who will be located in England for the next several years, it is revealed. Distribution of the English-made products will cover the British Empire and certain other countries.

Deal to Affect Films Also

Under separate but concurrent agreements, all substandard motion picture films owned or controlled by British Acoustic Films Ltd., will be distributed in the United States, its possessions, and throughout South America by Bell & Howell, thus augmenting considerably the Chicago concern's already enormous films owned or controlled by British Acoustic will distribute, in their territory, films owned or controlled by Bell & Howell's Filmsound Library.

Aussie and British Racetracks Negotiating for Telefilm

Australian racetracks in Melbourne and Sydney, in addition to representatives of courses in England, are currently negotiating to install the Telefilm system of photographing each individual race of thoroughbreds. This expansion of the Telefilming of races which has proved so successful at the Hollywood Park and Santa Anita tracks in Southern California, is disclosed by Joseph A. Thomas, president of Telefilm.

Pictorial Films' Releases

Total of 39 features, mainly from PRC and previously released in 35mm. size to theatres, comprise the 1946 releasing program of 16mm. pictures by Pictorial Films, Inc. Sol Lesser's feature, "Three's A Family," is also on the releasing schedule.



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SOVIET'S WAR DOCUMENTARY

The Great Turning Point

(Editor's Note: This article, radioed from Moscow, is an official release of the Soviet film industry. The author, Arkadi Kaltsaty, is one of the best of the Soviet cameramen—working with outstanding directors of that country for years. He has handled photography on several pictures with director Friedrich Ermler; and it was with the latter that he recently finished the full length film which is the subject of this article.)

It would be difficult to find anyone today who is not familiar with the word Stalingrad. In the minds of all friends of the United Nations, the name of this Russian city is associated with the great turning point in the late war, marking the beginning of the end for Fascism.

Prolonged defense of the ruined city, where every house and street witnessed the incredible staunchness and courage of the Red army and its men, seemed nothing less than miraculous to many—but, as everyone knows—this is not the age of miracles. Victory at Stalingrad was definitely the result of precise and timely execution of a brilliant plan of the Soviet High Command, and it was this plan which served as the theme of this new Soviet film, "The Great Turning Point."

Needless to say, such a film required the services of a first class scenario writer; and this assignment was filled by the promising young playwright, Brois Chirskov. The scenario, on the other hand, called for a brilliant and highly-skilled producer—and Friedrich Ermoler handled the responsibilities admirably.

An earnest and observant artist, he deals only with vital themes of the day. His heroes are thinking human beings whose exploits and certainly in justice of their cause gain them victory over the enemy. This was best exemplified by his films "First Comer," "Peasanta," "Great Citizen," and "She Defends Her

Country." It is also true of his new film, "The Great Turning Point."

Main role of the army general is played by Mikhail Derzhavin. Necessary portrayal of brilliance of strategy, will-power of leadership, loyalty of true friendship, and sense of justice—all were admirably portrayed by the artist in the most responsible role.

Many organizations of the armed forces gave intimate attention to the production of the new film, and did their best to help us. Many times, the director and his assistants consulted with the military specialists and frequently conferred with generals who have fought in the great patriotic war.

Actors were put through rigorous training. Ermoler was satisfied only when they had gained the smart bearing of the professional soldier. He dressed them in uniforms and made them walk through the streets of Leningrad—personally following in their wake. He watched every gesture of his "generals", and on one occasion, Ermoler asked the director of the studio to receive a group of army men consulting on the proposed film. A lively discussion on the film ensued, and it was only when they were taking leave that the studio official realized that his "guests" were none other than the actors assigned to the picture. Ermoler then explained that he had made this experiment merely as a test of the naturalness of his players, and that he was highly satis-

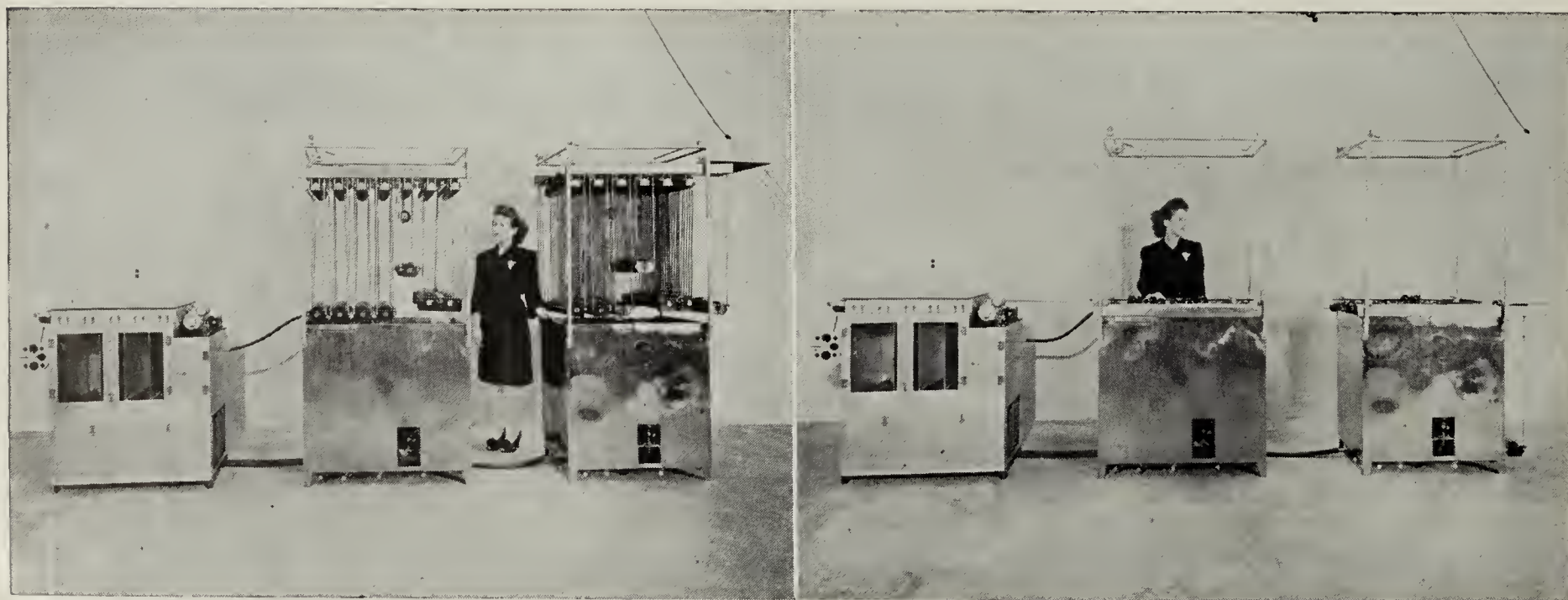
fied with the results. Now that the film is finished, we are pleased to hear from army officials that it is militarily correct in all details.

It was particularly difficult, of course, to re-create the atmosphere of war operations, but in this we received invaluable aid from the Red Army command.

We did our filming in the wake of advancing troops on what was only recently battle terrain. None of the customary filming tricks were necessary here; as the background locations were realistic scenes of very recent combat operations. We were assigned a large army detachment headed by eighty nine officers.

Preparations for filming at exact location of Stalingrad's renowned house 48 required several days. This is a circular scene in which spectators command a view of combat operations in three streets. Movement of the cameras had to be calculated down to the split second. For example, the camera had to be moved towards a certain point just when tanks were appearing and when the walls of neighboring houses were collapsing in flames and smoke. Slightest delay in proper timing would have spoiled a shot which could not have been repeated. All details had been so thoroughly practised and perfected by the camera crew that the panorama was filmed most successfully.

Success of "The Great Turning Point" coincided with another happy event in the life of Ermoler when the Soviet government awarded him the Stalin prize for his film, "She Defends Her Country," produced in the first year of the war. This was the second time that Ermoler received the Stalin prize; first of his films to receive the award being "The Great Citizen," story of the Soviet statesman, Skirov.



New Fonda developing machine built to Army Air Corps specifications for the processing of Ansco color film. This small unit has a capacity of approximately 12 feet per minute. It is portable in sections, each of the latter weighing approximately 300 pounds, and has all the advantages of the larger Fonda machines.

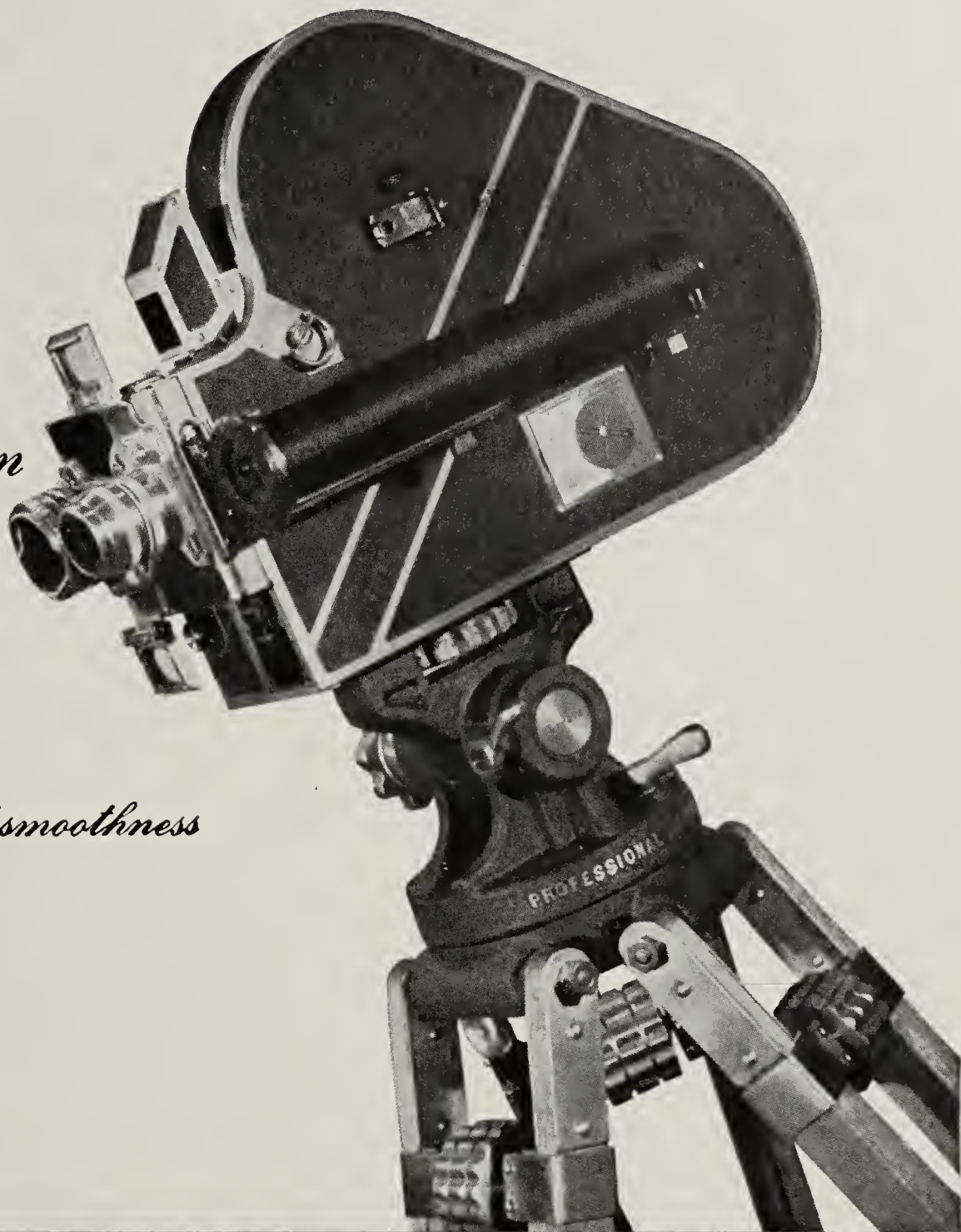
Whatever the action

follow shot
pullback shot
trucking shot
zoom shot

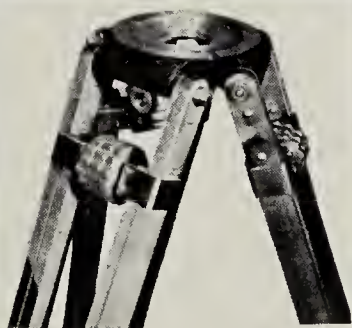
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AMONG THE MOVIE CLUBS

Syracuse Movie Makers

Three films from the library of AMERICAN CINEMATOGRAPHER highlighted the film program of the March 19th meeting of Syracuse Movie Makers. Pictures shown included: "Mood of Nature," by Paul Nurnford, F. R. P. S.; "In the Beginning," by Fred Ells; and "To the Ships of Sydney," by Sherlock. "California," by member Karl Cook, completed the program.

Recording demonstration of sound-on-disc featured the meeting on April 2nd; and a trial film was synchronized stroboscopically to disc, with the narration and music recorded and then played back at the meeting. U. P. Harvell, formerly with the AAF and a photographer on the Ploesti oil field raids, screened some of the films he took in the India and European battle areas at meeting held on April 16th. Showing was the first before a semi-public audience.

Utah Cine Arts Club

Lecture on the fundamentals of movie making — covering exposure, focus, and composition by Al Morton, featured the March 20th meeting of Utah Cine Arts Club, held at Teamsters Hall, Salt Lake City. In addition, Morton used his new 16 mm. sound projector to screen, "Man, Gun and a Dog" for the film end of the program; which also included: "Alaska Travel Picture" by Mr. and Mrs. J. W. Maycroft; and "Russian Easter," loaned by ACL.

Past president George Brignand functioned as program chairman for the April 17th meeting, when a technical lecture on movie making angles was delivered by vice president Pete Larson. Film program for the evening, in addition to the regulation surprise picture, comprised: "Up a Winding Road," by Larsen; "Thrills and Spills," by O. L. Tapp; "Summer, 1945, at Lost River," by J. F. McClement; "Atwood," by Kermit Fullmer; and "Vacation Land," by Vern Lunt.

Cinema Club of San Francisco

Cinema Club of San Francisco is planning a gala celebration for its 15th anniversary at meeting of May 21st, which will be preceded by a dinner get-together. Film program of the April 16th meeting, held at the Women's City club, included: "Guadalajara, Mexico & Environs," (8mm.) by M. L. Dreyfous; "Lake Tahoe," (16mm.) by L. Frano-vich; "L'Île D'Orleans," (16 mm., from ACL library; "Hetch Hetchy," (16mm.) by Leon Gagne. George Keeney of Ansco provided a discussion and demonstration reel of the new Ansco color film. Many members took their cameras and tripods on a special club visit to a nursery in Hayward, where a large collection of oriental peonies in full bloom were generously shot from all conceivable angles.

Brooklyn Amateur Cine Club

Seventh "Gala Night" of Brooklyn Amateur Cine Club spotlighted a new idea for programs of this nature — a Newsreel which included selected news items filmed during the year by club members. Contributors to the first edition of the club's color reel included Charles Ross, Charles Benjamin, Francis Sinclair, William Morris, and Irving Gittell. Other films shown included: "Farmer's Daughter," by Clarence N. Aldrich of Long Beach, Calif.; "Honey Harvest," by W. W. Vincent, jr, of Keneshaw, Wis.; "Awing and Afield," by Frank E. Gunnell; "Song of the Open Road," by Charles Benjamin; "Trapper," by Charles Ross; and "Windjammer," by Sidney Moritz.

Charles Debevoise presented his film, "Queens Is Ready" at the April 17th meeting; while Walter Bergmann is slated to be featured on program of May 15th for exhibition of a group of his outstanding films.

Los Angeles Cinema Club

Club secretary Jack Shandler reported a new high in membership of the Los Angeles Cinema Club at the April 1st meeting held at the Ebell Club's Fine Arts Hall; with roster showing 165 active members. With diversity the keynote of arranging each meeting program, films shown provided a fine balance of entertainment interest with: "While the Earth Remaineth," by Frank E. Gunnell; "High Sierra Vacation," by L. S. Peterman; "Navajo Land," courtesy of Santa Fe railroad; and "In All the World," courtesy of Great Northern railroad.

Alhambra La Casa

C. L. Ritter chairmanned the April 15 meeting of the La Casa Movie Club of Alhambra, California, at which film program comprised: "Tourist's Viewpoint in Mexico," by Hugh S. Wallace; "Four Seasons in the High Sierra," by Lloyd Austin; and "While the Earth Remaineth," by Frank E. Gunnell, ACL. About 50 members of La Casa journeyed to the Barstow area on the March 30th weekend to take pictures in the colorful Odessa and Mule canyons and the old mining town of Calico.

Los Angeles Eight

Arden Farms Clubhouse was site of the April 9th meeting of Los Angeles Eight Club, with a lucky ticket holder being presented with a roll of kodachrome film. Program included a brief talk on the simple features of titling, after which the club's technical committee took the floor to answer questions on photographic problems of members. Special contest for members during May will provide for prizes to be awarded for 50 foot subjects, suitably edited, in either color or monotone.

Philadelphia Cinema Club

Members of Philadelphia Cinema Club were provided with a new and decidedly interesting feature of the much-photographed "Colonial Williamsburg" at April 9th meeting held in Westminster Hall, when Harold Hoffman displayed his 16mm. film, "The Restoration of Colonial Williamsburg." Latter treats the subject in a manner never seen before, and few of the scenes were recognizable as similar to those in previous pictures. Other films on the meeting program included: "The Village Cut-up," produced by the 8-16 Movie Club; and "Safari on Wheels," through courtesy of Esso. Meeting was the first under guidance of Francis M. Hirst, the new president.

New York Eight

Eighth annual meeting of New York 8mm. Club was held at the Hotel Pennsylvania on April 26, with the program committee lining up "the greatest 8mm. show on earth" for the large turnout of members and guests. Subjects included: "The Bride's Biscuits," by George Valentine; "Garden Truck," by A. D. Furnans; "Southern Exposures," by Ernest Kremer; "Lassie Stays Home," by R. J. Berger; "This'll Kill You," by Lon Wadman; and "Return From Fire," by Dr. Linwood Heaver. April 15th meeting of the New York Eight programmed the following films: "The Story of America's Alertmen," by Victor Ancona; "The Past Master," by George Valentine; and "Major Investment," by R. E. Richards.

Westwood Movie Club

Westwood of San Francisco continued its interesting get-togethers with film program on March 29 at St. Francis Community Hall which included following films: "Wainwright Parade," (8mm.) by Eric Unmack; "Westwood's Fourth Annual Dinner," (8mm.); and a sound-on wire demonstration (courtesy of General Electric) by Fred Harvey and Don Campbell. Elsa Luck, chairman of the membership committee, has signed up 12 new members since recently taking office — another indication of the wider interest in movie making since film and equipment has become available.

Metropolitan Club

Harry Groedel's "Travelog" featured the April 18th meeting of Metropolitan Motion Picture Club, held at Hotel Pennsylvania. Other films included: "How Green Is the Earth," by Charles Benjamin; "Ski Legs," by Charles and Robert Coles; and "Windjammer," by Sidney Moritz. At the May 1st Supplemental meeting, Moritz will detail the planning of his vacation for the sole purpose of bringing back a movie of outstanding calibre and importance cinematographically.

KODAK MOVIE ACCESSORIES ARE BACK!

HERE are just a few Kodak accessories—now returning in growing quantities for better, more varied movie making. Many items are available right now. Soon, Kodak's full-range equipment and accessory line-up will return to fill your every movie requirement. Keep in touch with your Ciné-Kodak dealer.

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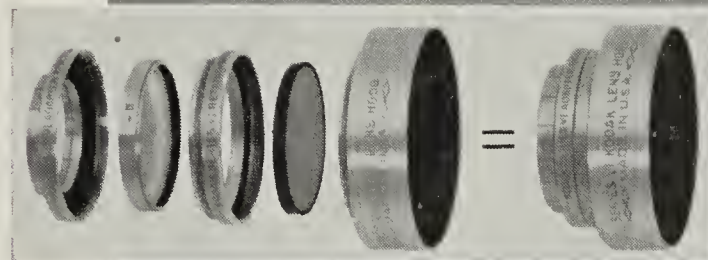
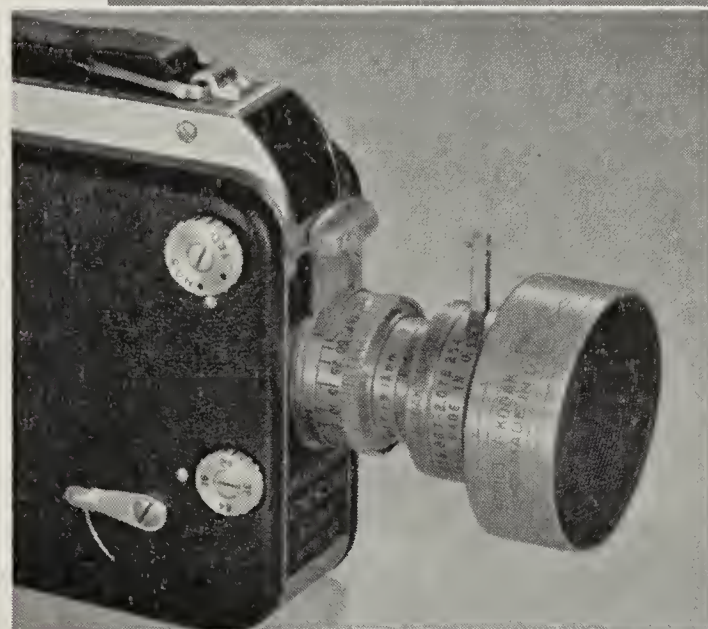
FILTERS—with Kodachrome, for more varied use of color film; with black-and-white, to heighten sky and cloud contrast, to reduce haze. Pola-Screens to deepen blue skies with Kodachrome, to control unwanted reflections. Portra Lenses for extreme close-ups. Lens Hoods as sunshades for lenses and attachments.

Filters of various kinds for Ciné-Kodaks are available in two styles—in "W" or "Z" mounts, that fit directly over the standard lens . . . and unmounted, as part of the Kodak Combination Lens Attachments adaptable to both standard and accessory lenses. The Combination Attachments also take, separately or jointly, Pola-Screens, Portra Lenses, and Lens Hoods.

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Ciné-Kodak Eight-25	f/2.7	Z
Ciné-Kodak Eight-60	f/1.9	Series V 1 ³ / ₁₆
Ciné-Kodak Magazine 8	f/1.9	Series V 1 ⁵ / ₁₆
Ciné-Kodak E, f/3.5	f/3.5	Z
Ciné-Kodak E, f/1.9	f/1.9	W
Ciné-Kodak K, f/1.9	f/1.9	W
Ciné-Kodak Magazine 16	f/1.9	W
Ciné-Kodak Special	f/1.9	W

Upper Right—Pola-Screen and Lens Hood in combination on the "Magazine 8." Right—Adapter Ring, Supplementary Close-up Lens, Retaining Ring, Filter Cell, and Lens Hood—they equal a businesslike assembly for better movies.



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Kodak

Buying A New Sound-Film Projector? ... Select It Carefully!

With the already indicated widespread interest of newcomers into the field of amateur cinematography, it is natural that many will want to acquire both cameras and projectors for their own personal use and enjoyment.

The attractiveness of the expanding market for the sale of cinematographic equipment to the amateurs is already projecting new camera and projector manufacturers into the field. From several sources come reports that sound-film projectors will be manufactured to retail at prices far below the standard and proven brands of such specific equipment in the pre-war period.

Which necessitates a word of caution to the prospective purchaser who might not have the advantage of expert advice on equipment desired from friends or associates. Members of amateur movie clubs, unless newcomers, are quite familiar with the performances and durability of the standard brand equipment—or can readily secure the proper information and comparisons from fellow club members.

NEW EASTMAN KODAK V.P.



E. P. "Ted" Curtis, veteran official of Eastman Kodak Co., who has been elected to post of vice-president of that company.

It must be borne in mind that cameras and projectors; professional 35 mm., 16 mm. and 8 mm.; require precision tooling in manufacture, and cannot be constructed on too great an assembly line basis. This requirement of machining various parts to very close tolerances, eventuates in wearability and performance satisfaction to the individual purchaser.

In the case of sound-film projectors, there is the added factor of the inclusion of a sound system which also necessitates parts that are precisioned. The time has passed when a 16 mm. sound-film projector will be accepted by an amateur enthusiast just as long as it will project a picture and reproduce any kind of sound—as was the case in the early 16 mm. machines.

From various reports in circulation, the standard and established manufacturers of 16 mm. cameras and equipment are planning to make available a number of models in each line. But the past experience and reputation of these manufacturers will not allow for the marketing of cheap and shoddy models which cannot deliver satisfaction in projecting a suitable picture or reproducing sound of suitable quality.

These models of machines to come forth will be in various price ranges depending on requirements of the purchasers. They will undoubtedly range (for lowest price) from the small projector to be used in living room at home for enjoyment by the family—where a small picture and not too great sound volume will suffice; to the large professional models designed for constant use in fairly large rooms or auditoriums where a large picture on the screen, long throw, and wide range of sound volume is necessary.

It is advised that movie enthusiasts intent on early purchase of a sound-film projector, carefully check over the models in line with individual requirements. Hasty selection because of cheapness in initial cost, may be regretted later. Remember, you get what you pay for.

MGM Starts 16mm. Feature Distribution Abroad

New policy of Metro-Goldwyn-Mayer to supply 16mm. prints of its feature and short releases for foreign distribution is being installed in 10 countries, company announcement discloses. Prints in 16mm. size are already being shipped, with likelihood that Latin American countries will start first series of minne exhibitions immediately. The countries getting initial 16mm. prints of MGM productions are: France, Belgium, Argentina, Puerto Rico, Cuba, Mexico, Chile, Panama, Venezuela, and the Philippines.

Victorian Amateur Cine

Annual open "Five Best" competition of Victorian Amateur Cine Society of South Melbourne, Australia, resulted in the following winners: "Miss Understanding," (16mm. B&W) by V. E. Pye, Sandringham, Victoria; "Sauce for the Goose," (16mm. B&W) by W. Philpot, Malvern, Victoria; "Blossom Time," (8mm. kodachrome) by L. K. Anderson, Forestville, South Australia; "Yarra Yarra," (16mm. kodachrome) by W. W. Norman, Caulfield, Victoria; and "Mountain Holiday," (16mm. kodachrome) by V. E. Pye. First named film also won the president's trophy for the best entry by a Victorian Club member.

Victorian Cine Society has membership of about 100, and maintains its own clubrooms. Latter are equipped with a Bell & Howell 16mm. projector, tip-up seats, and various equipment for use of members including dual turntables, records, microphone and amplifiers. An 8mm. projector will be purchased as soon as available.

Syracuse Movie Makers

Syracuse Movie Makers is now installed in quarters at 211 Glenwood Ave., Syracuse, N. Y., until such time as the organization can either purchase or lease its own clubhouse which would have sufficient space to house the processing equipment owned by the club. Latter includes facilities for processing of both negative-positive and reversal stock of either 8mm. or 16mm. film. Also available for members' use were two 16mm. step printers, one 16mm. continuous and sound track printer, and one 8mm. step printer—all designed and constructed by members.

As first step in expanding post-war activities, Syracuse announces a film contest among members to be judged late in the year. Films winning sufficient points from the judges will be awarded "Oscarettes" of merit on each phase of cinematography. Oscarettes are to be awarded on the basis of best editing, composition, titling, photography, sound recording, etc. Figurines will be permanently held by the winners, with additional ones to be awarded annually. Currently, a special committee is formulating the rules for the contest.

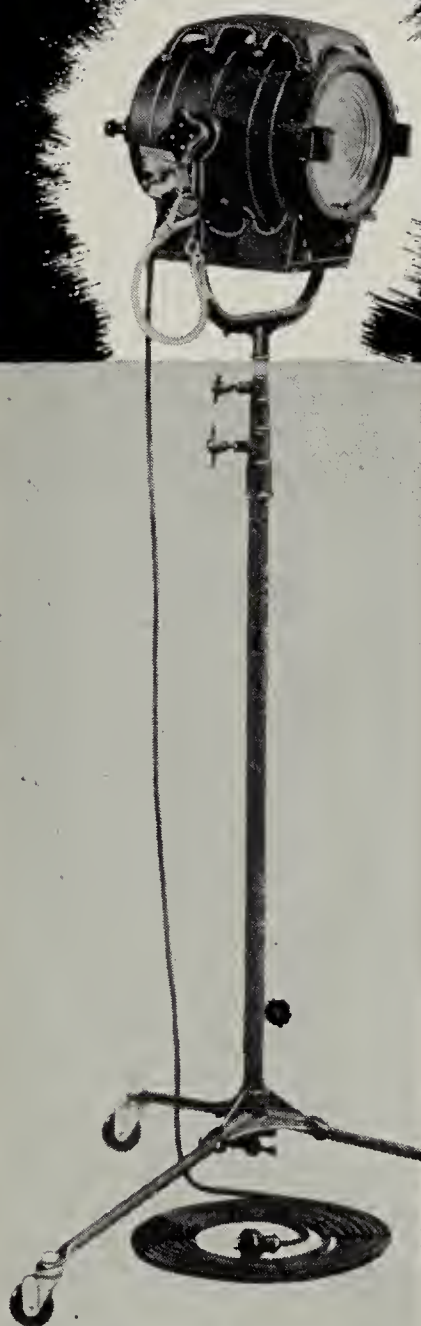
PSA Annual Exhibit Color Photography Oct. 30-Nov. 2

Annual exhibit of color photography will be held by Photographic Society of America at Rochester, Oct. 30 to Nov. 2 during the annual meeting of PSA. It is expected that several thousand prints and color slides will be entered.

Jones Appointed V. P. of Olesen

Charles M. Jones, a director of the Otto K. Olesen Company of Hollywood, has been appointed a vice president of the corporation. Olesen Company will distribute the new RCA-Victor 16mm. sound projectors for commercial outlets in the southern California field.

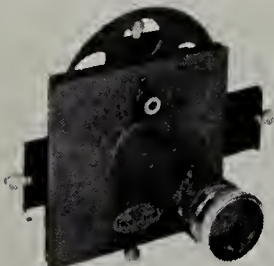
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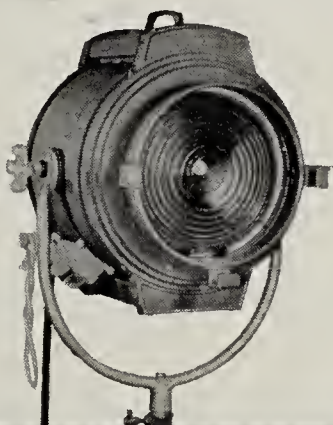
THE FOCO SPOT is for use with the Baby Keg-Lite and gives a concentrated spot of light with sharp edges in either round or rectangular forms. Revolving disc projects circles ranging from 3 3/4" to 8'6" in diameter. Novel background effects may be obtained with painted slides.

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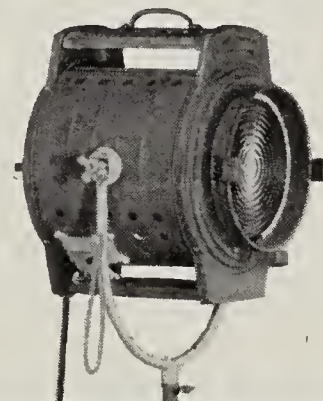
of the motion picture industry. It is characteristic of all Bardwell & McAlister lights that they are cool, noiseless and optically correct.

Fresnel type lenses on all Bardwell & McAlister spots permit full illumination with a smooth field which can be controlled for all requirements. Bardwell & McAlister lights are the accepted standard for excellence throughout the motion picture industry. Place your orders now for early delivery. No priorities required.



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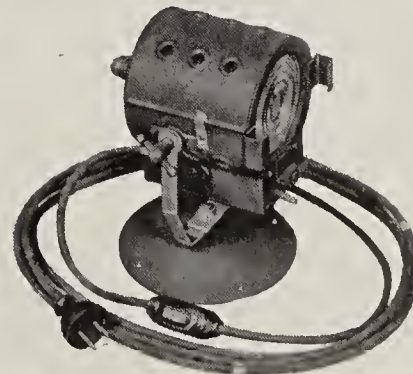
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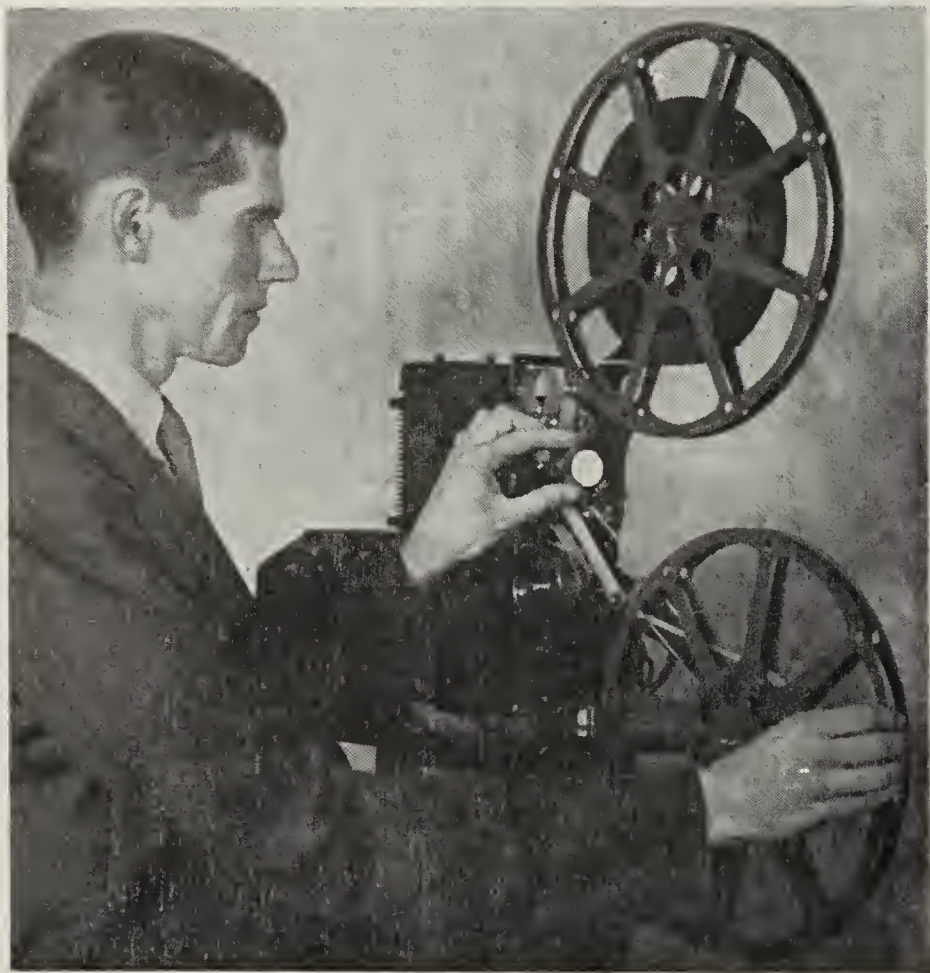
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The author at the controls of the Amprosound projector YA, which was used in conducting the extensive 16mm sound film survey.

SURVEYING THE 16 MM. SOUND FILM SUPPLY

By JAMES R. OSWALD

THE EXTENT to which 16mm will have an active part in this post war world of ours is a subject of great controversy in movie circles everywhere. In a few short years this "baby" of the industry has risen from a point of minor acceptance to one that commands world-wide recognition.

In its infancy, 16mm was primarily limited to educational, advertising, and home use. With modern recording and reproducing facilities paralleling that of its big brother, however, 16 mm is no longer viewed with the skepticism of "something new." Add to the economy angle the extreme compactness and portability of this lighter weight equipment, and you score a major victory for 16mm.

The war has served as a proving ground for this heretofore neglected member of the film world and has greatly advanced the cause of 16mm in professional fields. Not only then from the standpoint of rapidly training the GI in every farflung corner of the earth to the grim ways of warfare, but also the use of morale-boasting entertainment films, has contributed to giving 16mm a new place under the sun. Just how important a part this medium of teaching and entertaining has played in winning the war can never be estimated, but the record of 16mm goes unchallenged.

The writer has been in a position to conduct a very interesting and informative survey of the 16mm sound field. Close to 25,000 feet of film was analyzed on the basis of picture quality, sound quality, and general entertainment value. Educational pictures, musicals, comedies, cartoons, travelogs, and sport reels were included in the survey, representing a fairly complete coverage of the field. Films ranging from 100-foot musical shorts to complete Universal features in

16mm were analyzed. Also given careful scrutinizing was a specially prepared musical trailer, sound track only, produced by an independent laboratory for the writer, to be used for "intermission" purposes.

Months of preparation preceded the actual viewing of the films. First, catalogs were acquired from 16mm film rental libraries scattered throughout the country, from which a choice of material was to be made, assuring impartiality to producer and distributor. Then came the tedious task of selecting the films that were to take part in the survey.

A system of indexing was set up in the form of file cards whereon was recorded such vital information as film name, black-and-white or color, library available from, and rental rate. Each film which, after much deliberation, was considered to be a possible "candidate" for the survey was given a card of its own on which this information was recorded. If, when paging through the various catalogs it occurred that a certain chosen film was available from more than one source, the name of each library able to supply it was noted on the film's own particular card. Thus, not only a list of the various suppliers was provided for, but, in a way, the popularity of the film, itself, was attested to.

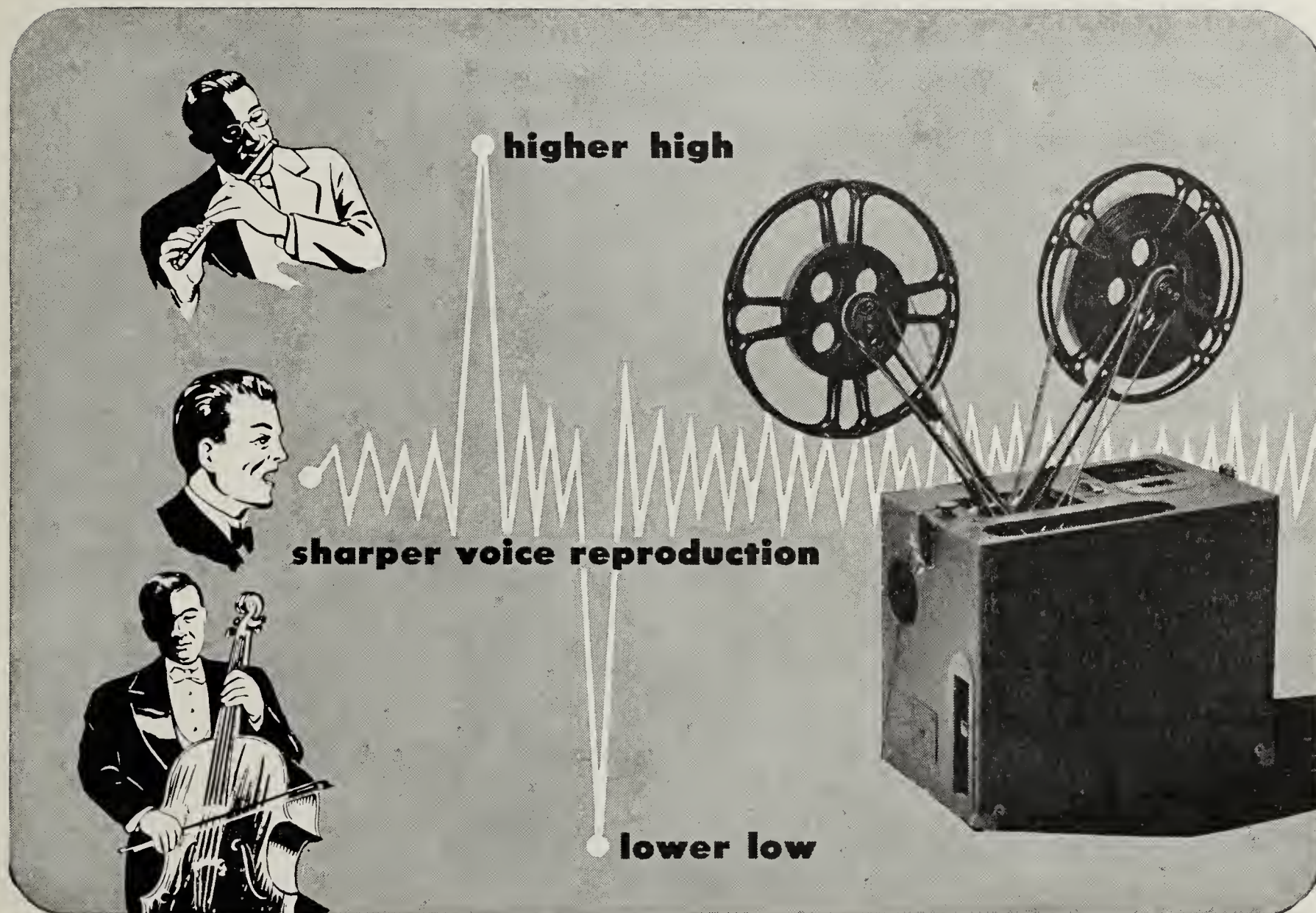
The next step was to select a representative group of libraries from whom the hand-picked films were to be supplied. Six such rental libraries, from a number of different localities, afforded about as accurate a cross-section of the 16mm industry as would be possible to attain. Booking orders were placed with the chosen distributors, with play dates carefully arranged to spread the arrival of shipments over the allotted time for

the survey. When it is considered that such a tremendous amount of footage was to be analyzed, with the necessity of keeping track of the arrival and returning of shipments to their respective libraries at the specified time, the systematic carrying out of the procedure is better appreciated.

As the films came in, each picture was projected on the screen, and scrutinized from all angles with the most critical eyes and ears. As each reel was analyzed, the file card pertaining to the particular film being witnessed was kept near at hand, and a notation made thereon as to the picture's "rating." Films were evaluated in one of four categories or classifications . . . very good, good, fair, and poor.

The survey extended over a period of two weeks, and from it some interesting facts were derived. Rental rates on films averaged from 75c for a one-reel short lasting approximately 10 minutes on the screen, to \$20.00 for a complete nine-reel feature with a running time of about an hour and a half. Naturally, however, prices vary also with the prestige of the actors and the prominence of the producer. Surprisingly enough, though, the most expensive product was not always found to be the most top ranking. Some of the modern shorts, for instance, released by comparatively minor producers, were proven far superior to many of the better known "name" brands.

With the ever-widening list of available sound films, and the extensive number of rental libraries already established, new horizons are in the offing for this medium of entertainment, not only in commercial fields, but for home use as well. Since the advent of motion pictures, many different film sizes and types have come and gone, often retaining their popularity for only a short time. From where I sit, though, one thing can be said with the utmost enthusiasm and certainty . . . 16mm sound is here to stay.



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Psychology and the Screen

(Continued from Page 161)

suggesting by means of a controlled intensity great emotional forces boiling about beneath the surface. Usually these roles have been purposely short on dialogue, allowing the player, by skillful pantomime and facial expressions, to put across ideas that would have been greatly inhibited had they been reduced to specific words. Not every player, of course, is equal to the demands of this *acting by implication*, but the Ingrid Bergmans, the Spencer Tracys, and the Paul Munis have become great because they know how to make one deft facial expression say more than ten pages of dialogue. A superb example of this is the performance given by Dorothy McGuire in the current release, "The Spiral Staircase." Playing the role of a mute, Miss McGuire gives a superb performance and manages to express a very complete gamut of emotions by means of skillful pantomime, speaking only *nine* words of dialogue throughout the entire picture. It is an axiom of screen psychology that the things left unsaid are sometimes more eloquent than those that are said.

Next to direction, the camera is the most powerful instrument in slanting a film psychologically. If a dramatic situation that is in itself interesting is given a camera treatment that complements and enhances it, the sequence is bound to draw a greater response from the audience. Added to this is the important

fact that camera angle determines the viewpoint from which the audience will see various phases of the action. The camera may be a detached, objective observer of the action; or it may now and then adopt the viewpoint of one of the characters and show subjectively how the action appears to that character. Although this viewpoint or *composition* continually changes throughout the unfolding of the story, it should remain consistent in its overall approach to the subject.

The film "Rebecca" is an outstanding example of camerawork precisely adapted to the requirements of a story surging with psychological undercurrents. In this film the somber mood, electric with suspense, persisted throughout; and the camera had constantly to maintain an approach that pointed up the effect. On the other hand, "Mildred Pierce" is a picture that varied in mood from the humdrum atmosphere of suburban home-life to the highly keyed excitement of murder committed in a lavish beach house. Each phase of this episodic screen story established a different mood and therefore required a differently keyed camera treatment. The final result on the screen, a changing pattern of light and shade in the handling of the camera, is a tribute to cinematographer Ernest Haller, A.S.C.

Well-executed camera movement is a device that does much to stimulate desirable audience reaction. By means of the mobile camera the spectator can be drawn in closely to the subject, raised or lowered, pulled back for a broader

view, or allowed to follow along while a player moves from one place to the other. Such movement permits a great fluidity of treatment, with the camera changing its point of view unobtrusively according to the requirements of the action.

The *close-up* has become an indispensable part of film technique. Its function is to focus attention onto minute details of expression or action that would otherwise be lost to the audience. It is a highly emphatic type of shot and should be used when specific details are psychologically important in the presentation of the story. Director Sam Wood effectively uses super close-ups of his players' faces in highly emotional scenes, so that no flicker of the eyelash or quiver of the chin fails to register its full impact on the audience. This technique was especially effective in "For Whom the Bell Tolls" and "Saratoga Trunk."

In line with the theory of leaving certain things to the imagination, it can readily be seen how silhouette and shadows can be especially useful in putting over psychological mood. When a scene is thus presented, all distracting details are omitted so that just the broad outlines of action and the dialogue are allowed to register. A forthcoming film, "The Stranger," forcefully photographed by Russell Metty, A.S.C., makes especially potent use of silhouette in several sequences.

Not only does the camera angle itself inspire certain reactions, but the direction of action in relation to the frame can also convey nuances of meaning. For instance, a diagonal line of action from corner to corner of the frame is more dynamic than action that moves straight across the frame. Similarly, a line of action approaching the camera is more forceful than action going away from the camera.

Working closely with the camera in the production of our modern motion picture is the element of *sound*. It is interesting how our theories regarding audience-imagination are borne out also in this field. Once, in discussing the subject of sound with the author, Cecil B. DeMille said: "In some ways radio is an even more provocative medium than the motion picture. In a film, for instance, the locales, the settings, the way the players represent certain characters—all of these factors appearing on the screen cannot possibly satisfy all members of the audience. But in radio where these details are not shown but are, instead, suggested by sound, the audience is free to fill in its own mental impression of how these things look, and each person's individual impression is perfect in his own mind's-eye."

Besides actually lending voice to the characters, the prime function of sound in the motion picture is to intensify the visual image, to sharpen the impact of what we see on the screen by letting us hear the sounds that go with it. Very often a certain element of sound is



"Mildred Pierce" ranged in mood from documentary realism to electric suspense, and utilized a constantly changing psychological approach to enhance each separate sequence.

pointed up out of proportion to its actual importance in order to psychologically underscore a bit of action. In the aforementioned film "The Stranger," there is a sequence in which a heated exchange of dialogue takes place following the running of a 16 mm. film. In this sequence the movie projector continues to operate after the film has been run through it, and the loose end of the film continuously flaps against the table-top providing a sharp rhythmic beat to point up the force of the dialogue.

A continuous pattern of sound over a series of cuts within a sequence tends to draw the separate scenes of that sequence more closely together. For instance, in a factory sequence if the sound of machinery is heard throughout, every scene intercut against that sound background will be assumed by the audience to be taking place in the same locale and at the same time as other scenes shown with that same sound accompaniment. Thus, sound aids in effecting smooth continuity.

Another relative factor in the auditory phase of motion pictures is background music. Functioning to underscore the visual image, music aids in heightening abstract emotions which are often difficult to express in terms of action and dialogue. Miklos Rozsa, winner of the 1945 Academy Award for his scoring of the film "Spellbound," is particularly adept at evolving musical themes which reflect psychological mood. In "Spellbound," for instance, the recurrent psychosis of the amnesia victim was expressed by means of a haunting melody full of fear and hopelessness. Again, in "The Lost Weekend," the same composer interpreted the main character's craving for alcohol by means of a weird musical theme that welled up periodically throughout the film, symbolizing the alcoholic's inner yearnings.

In "Dr. Jekyll and Mr. Hyde," the two sides of the main character's split personality fighting within him for possession of his soul, were symbolized by two conflicting musical themes that struggled to achieve mastery. In "Waterloo Bridge," the leading character's transformation into a prostitute was symbolized by the accompaniment of cheap honky-tonk music on the sound track as she walked the streets. In "Laura," the whole atmosphere of sophistication, mystery, and unseen horror was effectively embodied in the haunting musical theme that underscored the film.

Color, also, has a powerful psychological effect on an audience, and current color features are being designed with full attention to this detail. "Leave Her to Heaven" and "Frenchman's Creek" are especially good examples of color used to stimulate emphatic response. It is an axiom of psychology that "warm" colors (red, orange, and purple) stimulate the emotions, whereas "cool" colors (blue, green, and yellow) tend to calm the emotions. The designers of "Gone



Director of Photography Arthur Miller, A.S.C. (left of camera on crane), checks final rehearsal of strolling crowd for an overhead shot on the 20th Century-Fox production, "Anna and the King of Siam."

With the Wind" took full advantage of this fact, working generous amounts of warm color into the settings and costumes of the film's more highly dramatic sequences.

The precise art of film editing depends greatly upon the science of psychology. It is generally recognized that two pieces of film, taken as separate scenes, may have two separate and unrelated meanings—but that when these two scenes are joined together an entirely new dramatic concept arises out of the relationship. Actually, the final psychological effect of several strips of film cut together depends upon the approach used in assembling them, for the same fragments of action and dialogue can be made to express vastly different ideas depending upon how they are blended into an overall impression.

A good deal of the power of action and suspense films is created in the cutting

room. It is here, too, that the intangible but psychologically essential elements of *pace*, *rhythm*, and *tempo* are injected into the film. Editing requires a certain "feel" for dramatic values plus a keen understanding of audience psychology. The effectiveness of an entire film may hinge on how intelligently the separate scenes and sequences are fused into an integrated dramatic pattern.

In conclusion we may say that the modern motion picture is a blending of mechanical and creative arts slanted to the receptivity of the great mass-mind we call the audience. Because the film appeals to the mind and to the emotions, psychology and the screen are inseparably bound up together. A clearer understanding of this abstract but universal science on the part of film-makers will result in pictures that more effectively fulfill their major responsibility: to entertain the public.

Current Assignments of A. S. C. Members

As this issue went to press, members of American Society of Cinematographers were engaged in the Hollywood studios as Directors of Photography on feature productions as follows:

Columbia Studios

Burnett Guffey, "Gallant Journey," with Glenn Ford, Janet Blair, Henry Travers, Charles Ruggles.

Rudy Mate, "Down to Earth," (Technicolor), with Rita Hayworth, Larry

Parks, Edward Everett Horton, James Gleason.

Phil Tannura, "Cowboy Blues," with Ken Curtis, Jeff Donnell, Robert Scott.

George Meehan, Jr., "Sing While You Dance," with Ellen Drew, Robert Stanton, Amanda Lane.

Charles Lawton, "Rio," with Evelyn Keyes, Ann Miller, Tito Guizar, Allyn Joslyn, Veloz and Yolanda.

Henry Freulich, "His Face Was Their

Fortune," with Anita Louise, Michael Duane, Ted Donaldson.

Hal Roach Studios

John W. Boyle, "Curley," (Cinecolor), with Frances Rafferty, Larry Olsen, Eilene Janssen.

International Pictures

Lucien Ballard, "Bella Donna," with Merle Oberon, George Brent, Charles Korvin, Paul Lukas, Lenore Ulric.

Metro-Goldwyn-Mayer

Harry Stradling, "Till the Clouds Roll By," (Technicolor), with Robert Walker, Judy Garland, Frank Sinatra, Kathryn Grayson, Van Johnson.

Karl Freund, "Undercurrent," with Katharine Hepburn, Robert Taylor, Robert Mitchum.

Robert Surtees, "Tenth Avenue Angel," with Margaret O'Brien, George Murphy.

Hal Rosson, "My Brother Who Talked to Horses," with Peter Lawford, Beverly Tyler, Butch Jenkins.

Joseph Ruttenberg, "A Woman of My Own," with Greer Garson, Richard Hart, Bob Mitchum, Florence Bates.

Robert Planck, "Uncle Andy Hardy," with Mickey Rooney, Bonita Granville.

Charles Schoenbaum, "The Mighty McGurk," with Wallace Beery, Aline McMahon.

Monogram

William Sickner, "Jade Lady," with Kane Richmond, Barbara Reed.

Paramount

Daniel Fapp, "Suddenly It's Spring," with Fred MacMurray, Paulette Goddard, Macdonald Carey, Arleen Whelan.

Ray Rennahan, "Perils of Pauline," (Technicolor), with Betty Hutton, John Lund, William Demarest, Billy De Wolfe, Constance Collier.

William Mellor, "Welcome Stranger," with Bing Crosby, Barry Fitzgerald, Joan Caulfield.

Charles Lang, "Where There's Life," with Bob Hope, Signe Hasso, William Bendix.

Jack Greenhalgh, "Fear In the Night," (Pine-Thomas Prod.) with Paul Kelly, DeForrest Kelley, Robert Emmett Keane, Ann Doran.

PRC Studios

Vince Farrar, "Missouri Hayride," with Martha O'Driscoll, William Wright.

RKO Studios

George Barnes, "Sinbad the Sailor," (Technicolor), with Douglas Fairbanks, Jr., Maureen O'Hara, Walter Slezak, Jane Greer.

Nick Muscuraca, "What Nancy Wanted," with Laraine Day, Brian Aherne, Robert Mitchum, Gene Raymond, Fay Helm.

Edward Cronjager, "Honeymoon," with Shirley Temple, Franchot Tone.

Harry Wild, "The Falcon's Adven-

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ture," with Tom Conway, Madge Meredith.

Victor Milner, "It's a Wonderful Life," (Liberty Films), with James Stewart, Donna Reed, Lionel Barrymore, Thomas Mitchell.

Samuel Goldwyn Prods.

Lee Garmes, "The Secret Life of Walter Mitty" (Technicolor), with Danny Kaye, Virginia Mayo, Fay Bainter, Boris Karloff.

Gregg Toland, "The Best Years of Our Lives," with Myrna Loy, Fredric March, Dana Andrews, Teresa Wright.

Republic

Archie Stout, "Angel and the Outlaw," with John Wayne, Irene Rich, Gail Russell, Bruce Cabot, Harry Carey.

20th Century-Fox

Leon Shamroy, "Forever Amber," (Technicolor), with Peggy Cummins, Cornel Wilde, Vincent Price, Glenn Langan, Reginald Gardiner.

Arthur Miller, "The Razor's Edge," with Tyrone Power, Gene Tierney, John Payne, Anne Baxter, Herbert Marshall, Anne Revere.

Joe MacDonald, "My Darling Clementine," with Henry Fonda, Linda Darnell, Victor Mature, Cathy Downs, Walter Brennan, Ward Bond.

Harry Jackson, "Carnival in Costa Rica," (Technicolor), with Dick Haymes, Celeste Holm, Cesar Romero, Vera-Ellen.

Glen MacWilliams, "That's For Me," with Vivian Blaine, Harry James, Carmen Miranda, Perry Como, Phil Silvers.

United Artists

Karl Struss, "The Short Happy Life of Francis Macomber," (Award Prods.), with Gregory Peck, Joan Bennett, Robert Preston, Reginald Denny.

Robert Pittack, "Little Iodine," (Comet Prods.), with Jo Ann Marlowe, Marc Cramer, Eve Whitney.

Leo Tover, "Abie's Irish Rose," (Crosby Producers, Inc.), with Joanne Dru, Michael Chekhov, George E. Stone, Vera Gordon.

Bert Glennon, "The Red House," (Sol Lesser Prods.), with Edward G. Robinson, Lon McAllister, Allene Roberts.

Universal

Paul Ivano, "The Black Angel," with Dan Duryea, June Vincent, Peter Lorre, Wallace Ford.

Virgil Miller, "The Michigan Kid," (Cinecolor), with Jon Hall, Rita Johnson, Victor McLaglen, Andy Devine.

Hal Mohr, "Pirates of Monterey," (Technicolor), with Maria Montez, Rod Cameron, Philip Reed.

George Robinson, "Oh Say Can You Sing," with Shelia Ryan, Fred Brady.

Elwood Bredell, "The Killers," (Mark Hellinger Prod.), with Burt Lancaster, Ava Gardner, Albert Dekker.

Warner Brothers

Sol Polito, "Cloak and Dagger," (United States Pictures), with Gary Cooper, Lilli Palmer, Robert Alda.

Sid Hickox, "Cheyenne," with Jane Wyman, Dennis Morgan, Janis Paige.

Arthur Edeson, "Stallion Road," with

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Zachary Scott, Ronald Reagan, Alexis Smith.

Peverell Marley, William Skall, "Life With Father," (Technicolor), with Irene Dunne, William Powell, Elizabeth Taylor, Zasu Pitts.

Ernest Haller, "Deception," with Bette Davis, Paul Henreid, Claude Rains.

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Bell & Howell 1945 Earnings \$1.29 per Common Share

With net sales reaching an all-time peak of \$21,930,971.69 in 1945, despite heavy cut-backs in government orders following VJ-Day, Bell & Howell Company, Chicago makers of precision photographic equipment for 39 years, enjoyed the most productive year in its history it is revealed in its annual report to stockholders, just released.

According to J. H. McNabb, president and chairman of the board, net earnings of the corporation aggregated \$672,491.35 for the fiscal year ended December 31, 1945, after provision for Federal income and excess profits taxes amounting to \$2,065,228.71. After payment of dividends totaling \$77,250 on the cumulative preferred stock, 4¼% series, the net profit was equivalent to \$1.29 per share on the 462,375 shares of common stock, \$10 par value outstanding.

Facilities Greatly Enlarged

Bell & Howell has now exercised its option to purchase the 2¼-million dollar Lincolnwood plant from the Reconstruction Finance Corporation at a price which has not yet been determined. In 1945, a 25,000 square foot storage warehouse was built adjacent to the main Lincolnwood plant. Now, construction has begun on a new Lincolnwood factory building, designated as Plant No. 7, affording 86,000 additional square feet of floor space. "With these new plants and facilities, Bell & Howell will have trebled its pre-war physical capacity, since both the Larchmont and Rockwell plants are to be in full production on new lines of merchandise," Mr. McNabb states. Negotiations of an international nature, have greatly augmented previous facilities also.

Conversations begun in June, 1945, between J. Arthur Rank, leading figure in the British motion picture field, and J. H. McNabb resulted in the finalizing of agreements, reported recently, whereby Bell & Howell, the Rank Companies, and British Acoustics Films, Ltd. will pool manufacturing interests to a considerable extent. This arrangement has consolidated the Bell & Howell position in international trade, and it is felt that

such integration will be reflected in subsequent operational and merchandising performances.

Mobile Service Unit Introduced

In line with the company policy of making only precision equipment and maintaining it at maximum efficiency thereafter, Mrs. McNabb in 1945 inaugurated a "mobile service unit" system consisting of completely equipped trailers, staffed by experts. These units, which are to be operated by Bell & Howell special representatives in large numbers, are designed to afford on-the-spot attention to owners of Bell & Howell equipment throughout the country. This innovation has bolstered the firm's already efficient service organization, the nucleus of which is 60 strategically located authorized service stations and factory branches.

Company Outlook Told

Regarding the outlook for the photographic industry in general, and Bell & Howell in particular, Mr. McNabb stated, in concluding his annual report, "We believe the photographic industry to be on the brink of a new peace-time era which is destined to remove it from the luxury classification to its rightful position as a basic necessity for home, school, church, community, and industry." The company, he went on to state, "is charted to a broadened and even higher position of leadership within this industry than it has ever before held."

Hints on Preserving Your Phonograph Records

As more and more amateur movie makers are utilizing phonograph records to provide music background sound accompaniment for personally-made subjects, the following abstract from the lecture, "Sound for the Amateur Movie Maker," presented by J. C. Vogel at November meeting of Metropolitan Motion Picture Club of New York, is particularly informative.

Keep your records in album or envelop to protect them from dust.

Do not use brushes to clean records—they are apt to leave more dust than they remove. One authority advises that dusty records be washed with cold running water and dried with a silk cloth.

Do not use lubricants or fluids to preserve records. They collect dust and irregularly block up the tiny grooves.

Do not use ordinary phonograph needles, cactus, thorn or fibre needles on home-cut records. Sapphire Stylus is preferable.

Do not use a heavy pick-up if you expect home-cut records to last for some time. If a heavy pick-up is unavoidable, use a bent shank playing needle.

Do not store records horizontally in a pile. Always stand them on edge so that the weight will not push them together.

Do not store records in excessively hot, cold, dry or humid places. Store them where people live. Where people can exist, so can records.

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Aces of the Camera

(Continued from Page 159)

hard taskmaster with a keen appreciation of those skills requisite to a first-class job of cinematography. Bob's entrance into the camera fraternity had been entirely too casual to suit the requirements of the exacting Mr. Brown, who decided to teach Bob the intricacies of the business. At Karl Brown's insistence, and under his helpful guidance, Bob studied the science of optics, delved into the chemistry of photography, the details of laboratory procedure, and anything else that would give him a greater knowledge of his chosen profession.

He must have been an apt pupil because he remained with Karl Brown for six years. During those years that camera team made pictures that have come to be considered among the milestones charting the technical and artistic progress of the motion picture industry. Among them were the James Cruze epics, including "The Covered Wagon." And Bob's camera was one of those that photographed "The Ten Commandments" for C. B. DeMille.

The resourcefulness he learned during the years with Brown stood Bob in good stead on his next picture. In 1926 Karl Brown became a director, and his first assignment was entitled, "Stark Love"; which was to be Hollywood's first attempt at realism, using what is now known as "documentary" technique, as applied to a feature picture. It called for the use of local talent filmed in indigenous surroundings. The locale was the South.

With Paul Wing as assistant director and production manager, Jimmy Murray and Bob Pittack on the camera, Karl Brown toured the South getting "Stark Love." And, while capturing the natural reactions of some of the natives in their natural habitat, gave his crew a terrific workout and every possible opportunity to prove their ability to be adaptable. The fact that most of the "actors" had never before seen a movie camera didn't help. But the high praise the picture received at the time of its screening is eloquent testimony of the quality of the product despite the hazards of production.

When Bob went to Paramount he was again fortunate to come under the aegis of two more top-ranking cameramen. First, he worked with Al Gilks, A. S. C., now Commander Gilks who more recently did such an outstanding job training cameramen for the Navy; then with Charles Lang, A. S. C., photographing the Ruth Chatterton pictures. With Lang he also shot, "Farewell to Arms," the Academy Award winner, and "Lives of a Bengal Lancer."

When Emanuel Cohen left Paramount to form his own company, Major Pictures, he invited Bob to go along as production cameraman. His first picture, for Columbia release, was the highly rated Bing Crosby starrer, "Pennies from Heaven."

After a couple of years shooting the

popular Charlie Ruggles and Alice Brady series Bob went to Metro-Goldwyn-Mayer to make shorts and shoot for second units — assignments that frequently call for the utmost in skill and dependability but which result in little, if any, recognition or critical acclaim.

Then Bob photographed the first picture to star Jean Hersholt as Dr. Christian, a production that was to launch that kindly medico to international fame in radio as well as pictures. He also did the Bill Bendix and Bill Tracy series for Hal Roach.

Another independent producer who has proved time and again that he knows what's what at the box office, Edward Small, has made good use of the Pittack talents to assure himself photographic excellence for some of his hits.

Bob Pittack is at the peak of his career. His background and experience has been sufficiently long and varied to give his work mellowness and authority; which, coupled with his imaginative approach contributes those elements to a production that a producer has the right to expect from his Director of Cinematography.

It is to be hoped that the anticipated success of "The Sin of Harold Diddlebock" will not only assure the moviegoers of the world the continued efforts of those brilliant talents Sturges and Lloyd, but will also assure Robert Pittack, A. S. C., continuing recognition as one of Hollywood's top-ranking Aces of the Camera.

SMPE Technical Conference in New York May 6-10

One of the most informative Technical Conferences of the Society of Motion Picture Engineers since the outbreak of the war will be held at the Hotel Pennsylvania, New York City, May 6th to 10th. In order to accommodate the largest and most ambitious program of papers on new technical and engineering practices ever conducted on the Atlantic coast, the meeting has been extended to five days instead of the customary four.

The important reports and discussions scheduled for the technical sessions, together with resumption of social features which were omitted at the society's wartime conferences, are expected to bring together one of the largest and most distinguished gatherings of motion picture engineers and scientists ever assembled.

Special program features which have been planned, according to William C. Kunzmann, convention vice-president of SMPE, include a symposium on new developments in color motion pictures, to be held Monday, May 6, in cooperation with the Inter-Society Color Council, and a group of papers on acoustics at a session on Friday, May 10, to which members of the Acoustical Society, opening its own conferences on that date, will be invited.

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Survey Current Color Processes In England

(Continued from Page 164)

nical perfection and so dominates the field of commercial colour cinematography that any discussion of its disadvantages or limitations will seem strange. Yet consideration will show that—no matter how successful a process may be when judged as a technical achievement—factors still remain which are only indirectly connected with the technicalities of any given printing process, but which nevertheless wield considerable influence in the sphere of motion picture production.

"For instance, the average cameraman would rather photograph in colour using his favorite type of single-film camera than with a large and complex three-strip camera, however perfectly the latter may be designed and built—and he would certainly prefer to be relieved of the everlasting necessity for avoiding those chance reflections and 'against the light' effects which add so much to his

work in black-and-white, but which are so dangerous when bi-pack is being exposed in one gate of a three-colour camera.

"Most producers, too, would welcome any process which call for no special cameras or crews and which could be processed in any one of several laboratories. Again, the public are not concerned to learn that an imbibition colour printing process utilizing three dyes which closely approach theoretical requirements and employing silver separation negatives obtained directly from the subject is likely to produce greater accuracy in colour reproduction than a multi-layer process depending upon subtractive primaries whose hue and saturation leave much to be desired. In fact, it seems that owing to the abnormal conditions under which motion pictures are viewed, a print which would be an accurate reproduction when measured on a colorimeter will appear false to the average observer when seen on the cinema screen, while a print which has suffered degradation or desaturation will often be accepted as being 'more natural.'

Technicolor Cameras

"By far the largest proportion of Technicolor photography is carried out with the renowned Technicolor camera, and while it cannot be denied that the use of such a camera is in many ways undesirable from the producer's point of view, nevertheless many of us will still admire the initiative and ingenuity which the design and construction of this camera certainly represents. It is interesting to remember that substantially the same camera as that used in the studios today was first made and used in 1932. It may be possible for Technicolor to dispense with the three-film camera in due course, but Dr. Kalmus, as recently as 1944, said that one of the intentions of his company was to offer for gradual adoption new and improved Technicolor special cameras. The colour camera itself is not so very large, but its triple magazine, weighing some 70 pounds when loaded, together with the more powerful motors which are necessary to drive the two Mitchell movements and transport the three films, all add up to a much heavier and larger outfit than anything used for black and white work. When the camera is required to be blimped the problems of size and weight do become formidable—

the full-sized blimp occupying 16 cubic feet of studio space. However, in all other respects the Technicolor camera and its associated equipment is extremely convenient and versatile.

"Despite the difficulties involved in the design of short focus lenses for use with the prism system, the camera may be used with a special wide-angle lens of the negative telephoto type giving an effective focus of 25-mm., and although this particular film gives some distortion there are in addition 35-mm., 40-mm., 100-mm., and 140-mm. lenses available. A very convenient finder is used with these lenses, a finder which remains attached to the camera whether the blimp is being used or not and which results in the separation of the finder lens by only three or four inches. In Hollywood, eight different Technicolor camera motors are available to meet almost any conditions of shooting, and there are specially designed units for aerial photography, underwater work and even a three-film camera capable of operating at 96 frames per second. The overall speed rating of a Technicolor camera is probably in the neighborhood of Weston 6 to daylight and to corrected high-intensity arc-light.

"Recent patent literature shows that the technicians of Warner Brothers are concerning themselves with the design of a three-colour beam-splitter camera which provides the required set of three separation negatives on only two lengths of film. Each of the pull-down movements is of the 'double-throw' type, exposing only every other frame so that one of the two films, having been used as the rear element of the bi-pack, after being suitably looped, may be introduced in the second gate in such a way that the frames which were not exposed in the first gate become exposed in the second. Only half of the total length of the front film of the bi-pack is used and special means have to be devised to print the out of step negatives which result.

"The only indication given regarding the method of printing which it is proposed to employ suggests that the 'silver' separation negatives will be used to print simultaneously in register and through the appropriate filters on to multi-layer stock of the Kodachrome type. Such a proposal emphasises the importance which the patentees attach to the use of 'silver' separation negatives as the starting point in subtractive colour printing. The Russians built their first three-colour camera in 1936; it is known as



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ZKS-1, and was made in Leningrad to the design of A. A. Minn. The camera employs a prism block beam-splitter and uses bi-pack in one of the two Mitchell type gates.

Kodachrome

"Kodachrome was the first successful multi-layer colour film, and it has been in continuous use in sub-standard sizes since 1935. A similar 35-mm. stock, now known as 'Monopak,' seems to be used solely by Technicolor in normal cameras as an occasional alternative to their three-strip method. However, the use of Kodachrome or 'Monopak' does entail a very complicated chain of processing operations, and it has recently been stated that Technicolor's interest in integral tri-pack is at present only confined to the master film because it appears that three-layer raw material is inherently so expensive that it could not compete in cost with Technicolor imbibition prints for release purposes.

Agfacolor and Ansco Color Stock

"Just at present, many people feel that the future of colour cinematography rests with the Agfacolor or Ansco Color type of process. There is a similarity between Kodachrome and the Agfa and Ansco materials in that all of them are integral tri-packs or monopacks which automatically separate the image of a coloured scene when exposed in an ordinary camera, but after exposure the similarity ceases, and the two types of material must undergo entirely different processing.

"Agfacolor was originally processed by reversal, and this technique seems to have been adopted by Ansco in America. A special soft gradation taking material is used when 35-mm. duplicate copies are required—the film, while of the reversal type, has a much lower contrast than the normal reversal and is itself unsuitable for projection. This soft material is intended to be used as a 'master' from which release prints are made on normal Ansco Color reversal duplicating stock.

Summing Up

"Some of us believe that if the greatest accuracy of colour rendering together with the highest photographic quality are the primary factors to be considered,

then 'silver' separation negatives must be obtained directly from the subject, either by means of a suitable three-film camera or with the aid of a silver image tri-pack which is integral at the time of its exposure but which can be separated during processing. Others claim that the logical people to shoulder the principal burden of providing colour are the sensitive materials manufacturers, who must be looked to to produce multi-layer materials which will permit the use of ordinary cameras and something like ordinary processing. However, those who hold the latter view do not always realise what immense problems are involved in the consistent commercial production of such materials, nor do they always fully realise their inevitably high cost.

"Certainly we cannot ignore the 'invitation' of Dr. Herbert Kalmus, who as President and General Manager of Technicolor Incorporated and Technicolor, Ltd., last year found himself in the unusual position of being able to tell his stockholders that his management questioned 'whether Technicolor might not be healthier and happier if sound efficient competition arose to share with it the programme of serving the industry with ever-improving colour quality and steadily lowering costs'."

New Optical Printing Enterprise

Donald Manashaw, recently released from the Navy where he was associated with the training film and motion picture branches as a Lt. Commander, has launched a 16 mm. optical printing business in Burbank as service for minnie-film producers. He will specialize in all phases of optical printing for 16 mm. as is provided by regular studio departments for production.

Special Commendation from Navy for Leonard Roos, A.S.C.

Leonard Roos, A. S. C., globe trotting cinematographer, recently received a special commendation from the Navy, with the scroll signed by Secretary James Forrestal and Rear Admiral Miller. Citation reads: "for outstanding performance and service rendered to the United States at war as an accredited Navy war correspondent."

Term Contract for Art Arling, A.S.C.

Arthur E. Arling has been signed to a term contract by 20th Century-Fox studios as a cinematographer specializing in color photography. During the war, Arling was a Lieutenant Commander in the Navy photographic services, and previously had been a staff cameraman at Technicolor.

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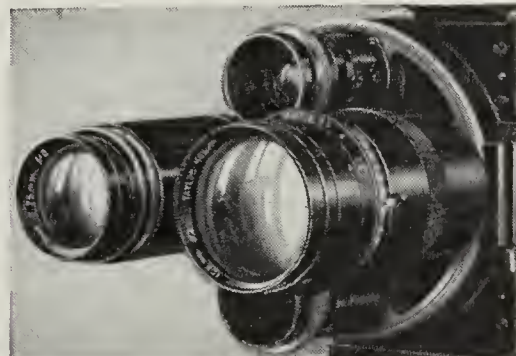
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Jet Photographic Plane Being Tested by AAF

America's first jet photographic airplane, the XFP-80A, is being tested in photographic flight experiments, officials of Air Materiel Command, Wright Field, Dayton, Ohio, announced recently.

A modified P-80, the XFP-80A is being tested under the joint supervision of the Lockheed Aircraft Corporation, manufacturers of the plane and AMC. The tests to date have shown the plane permits much improved aerial photographs and greater interchangeability.

Owing to the lack of vibration from the jet engine, pictures have been taken from an altitude as high as 35,000 feet and the results have been astoundingly clear.

The jet installation in the XFP-80A affords interchangeability from fighter to photographic plane with so much ease it can almost be called a two-in-one plane. The removal of just four bolts and the armed nose of the P-80 can be replaced with the nose containing the cameras of the XFP-80A. This, plus the relatively simple job of connecting the camera controls within the cockpit, is all that need be done to make the plane ready for flight as a photographic plane.

A problem presented by the excessive speed of the P-80 was that of assisting the pilot in procuring pictures of the area with which he was concerned. In answer, a new device called the View Finder, was designed. This View Finder is expected to be installed on the XFP-80A and will work similar to a bomb sight. Its physical appearance can be likened somewhat to that of a submarine periscope.

With the View Finder, no matter how great the flying speed, the pilot is able to determine, far in advance of taking the picture, that he has the particular area he wishes to photograph in the sights of the camera lens.

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National 16 mm. Exposition

Allied Non-Theatrical Film Association, national trade organization, will sponsor and stage the first annual trade show to be entirely devoted to professional and commercial 16 mm. movies.

Event will be held at Hotel New Yorker, New York City, May 9, 10, 11, with entire mezzanine floor converted into display booths for exhibition of equipment and accessories by 66 prominent manufacturers and producers.

Ampro's 25 Year Men

A. Shapiro, vice president and chief engineer, and C. Schroeder, shipping room foreman, were recently honored at a dinner tendered by their associates for completion of 25 years of uninterrupted service with the company. Axel Monson, president and founder of Ampro, presented both Shapiro and Schroeder with watches as mementoes of long and faithful service.



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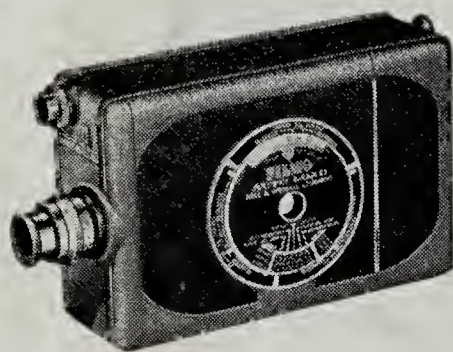
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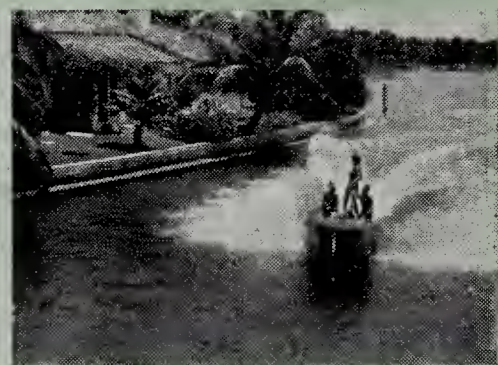
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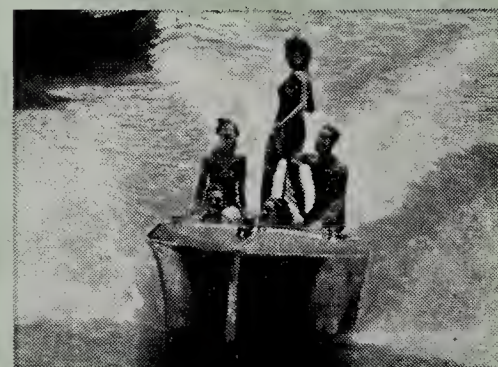
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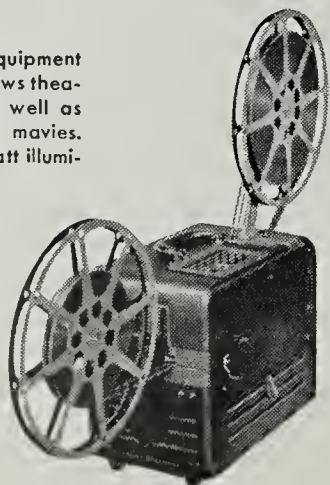
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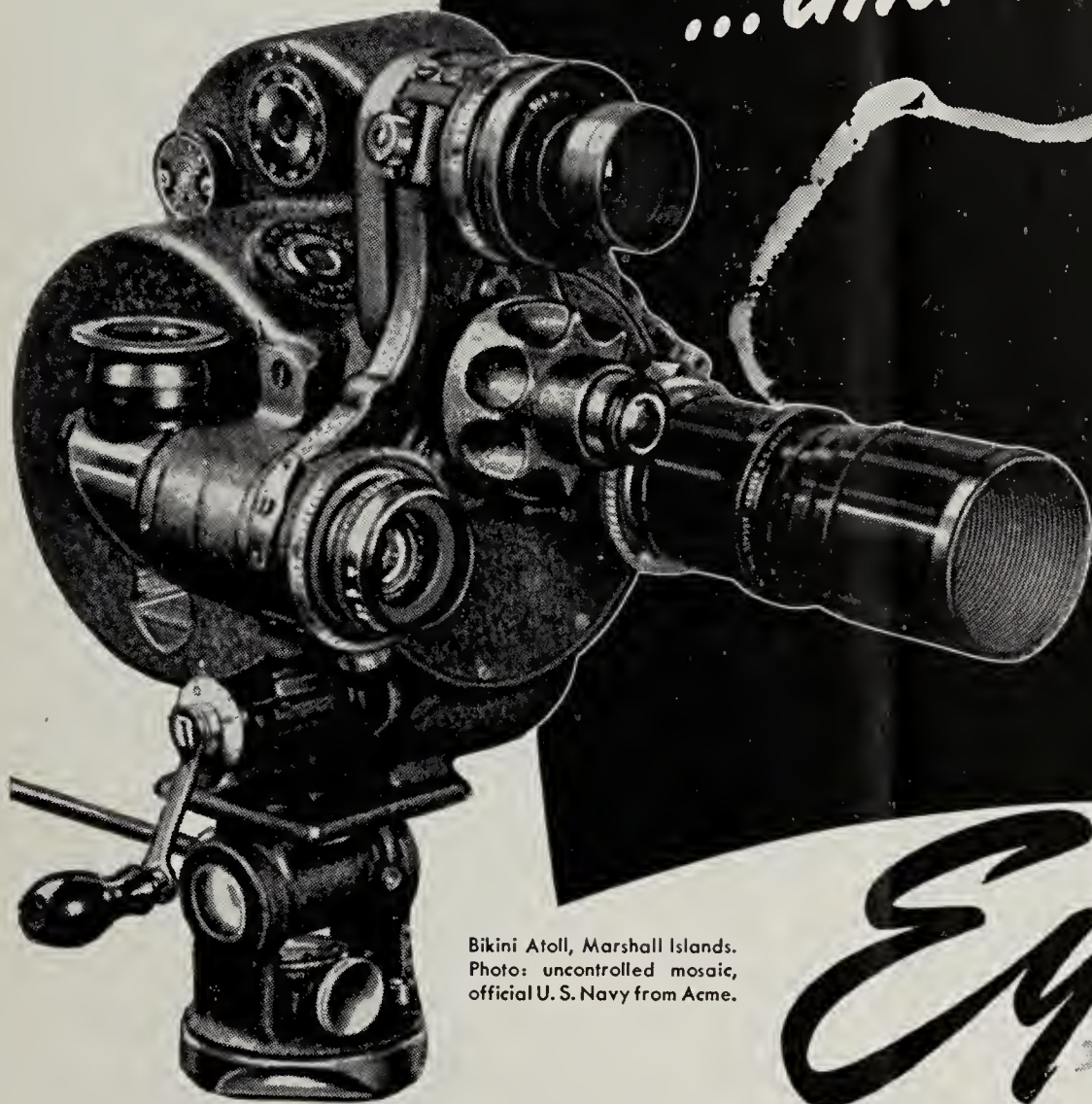


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THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

JUNE, 1946

NO. 6

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ON THE FRONT COVER Producer-director Joseph Burne conducts final rehearsal of a musical number for "Down Missouri Way"—PRC production. Director of Photography Vincent J. Farrar, A. S. C., is at right of the camera checking the scene.



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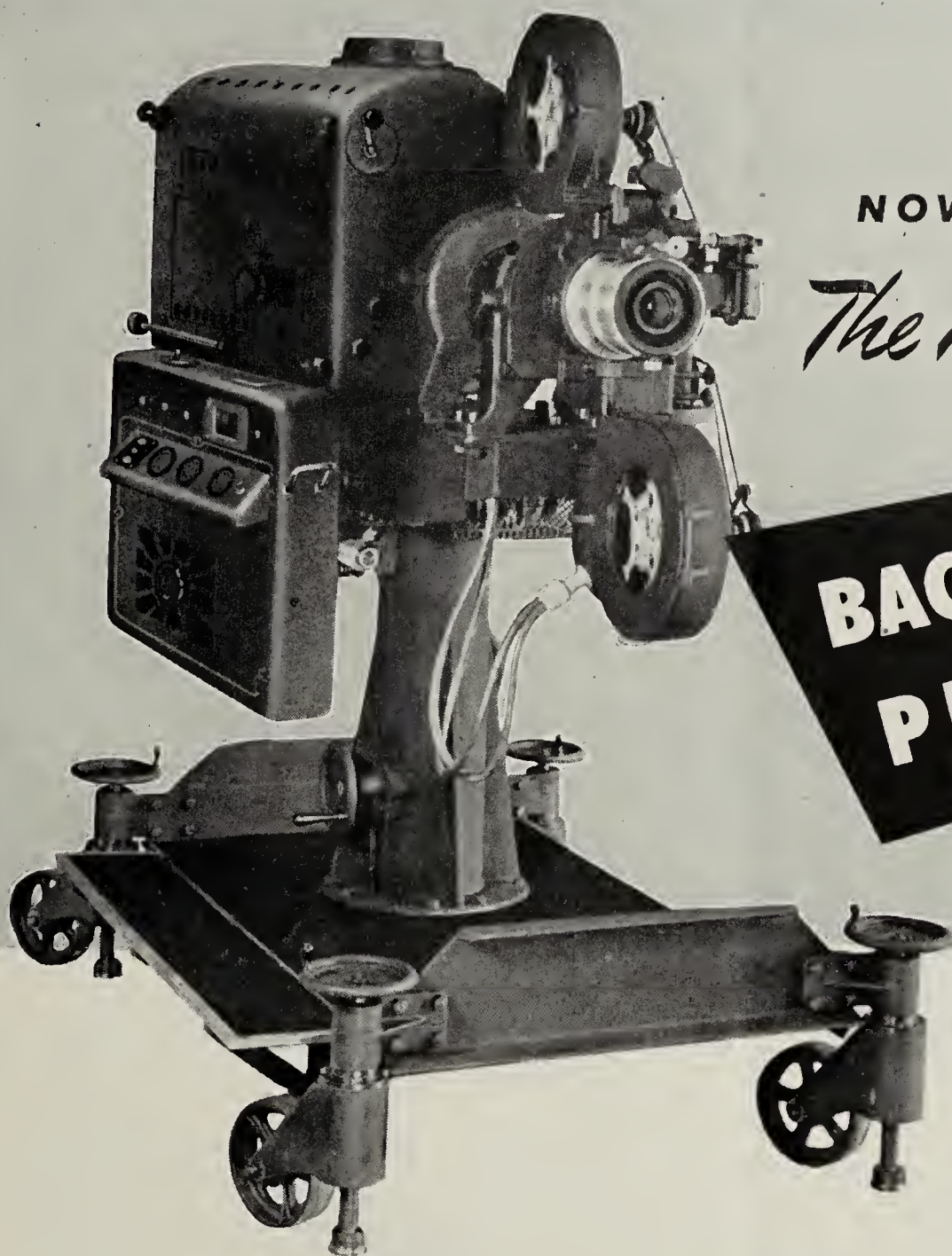
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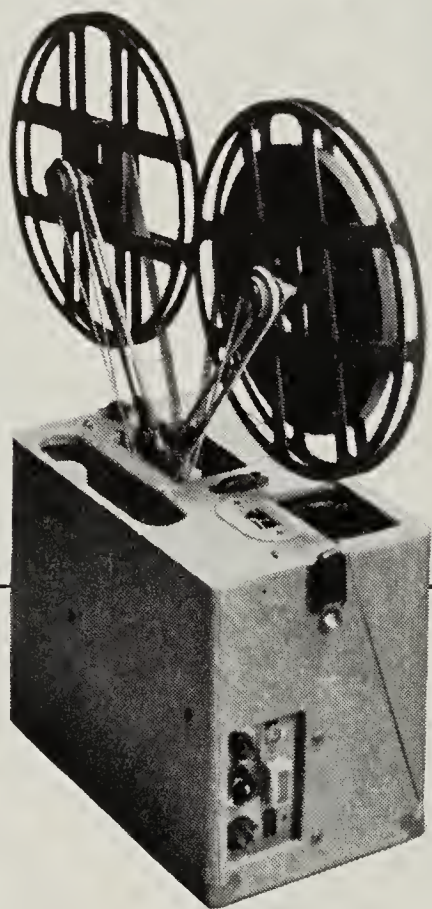
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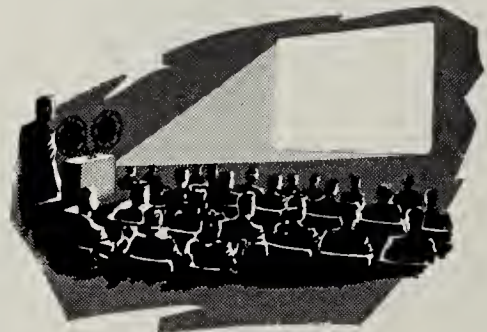
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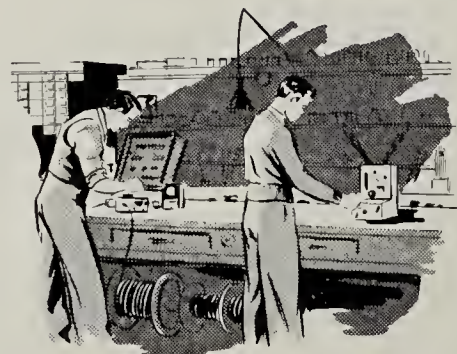
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SPECIALIZED PHOTOGRAPHY APPLIED TO ENGINEERING IN THE ARMED FORCES

MAJOR P. M. THOMAS and CAPTAIN C. H. COLES
(A. A. F., Special Photographic Services, Wright Field, Ohio)

Historical

Although sporadic attempts had been made from time to time at Wright Field to employ the latest methods of photography toward the solution of aircraft problems, no concentrated effort was made to press its advantages until the Photographic Engineering Branch of the Technical Data Laboratory, Engineering Division, was organized in the middle of 1943. Now it has grown to a total personnel of 65, and has spread into 2 buildings. Its work has been deemed so important that its program has remained virtually unchanged since V-J day.

Organization

The organization gives a good idea of how a problem is attacked. When a laboratory on Wright Field requests work to be done, the Projects Branch surveys the problem. The varied experience of its project engineers is of tremendous value in deciding a method of attack. One of these engineers makes an outline of the essential information to be obtained, Dr. H. E. Edgerton and Gjon Mili, staff consultants for this organization, may be called in for advice.

(This paper was originally presented at October, 1945 Technical Conference of Society of Motion Picture Engineers, and published in March, 1946 issue of SMPE Journal. Reprinted by special permission.)

As an example, the Jet Powered Unit requested that velocity and acceleration studies be made of the take-offs of the newly completed American version of the German V-1 flying bomb. A project engineer flew to the test base where the launching ramps were under construction. He decided that a camera tower had to be constructed at a certain location and 10-foot distance markers erected along the launching track. These were built under his direction.

The project was now turned over to the Field Branch and a crew was sent with high-speed motion picture cameras, batteries, timers, and developing equipment. The first few take-offs of the experimental bombs were filmed and the records flown back to Wright Field, where the Analysis Branch took over. Here the films were studied and velocity and acceleration curves were drawn from the information obtained from the films.

The curves and tables were now returned to the same project engineer who initiated the action. From these data he assembled the final report and submitted it to the engineers of the Jet Powered Unit. This completed the job.

An interesting side light on this particular project was that the films showed not only that the first flying bombs failed to attain adequate speed to enable them to fly, but also the exact

cause of the failure. It was poor rocket placement and consequent loss of power during take-off.

The high-speed photographic equipment does only a part of the work of the organization. Special photographic triangulation methods are employed to determine the height of aircraft and bombs at any point, the path of an airplane or falling projectile, the successive positions in space of a helicopter or a parachute.

When existing cameras are inadequate for a required purpose, the Installation and Fabrication Unit designs its own or turns its specifications over to a commercial company. A specially constructed camera of this type is being used to photograph the indications on instrument panels during flight tests or wind-tunnel tests. One of the first to come off the production line was used to make the famous pictures of the explosion of the first atomic bomb in New Mexico.

Color photography has grown in importance as a recording medium for engineering data. Corrosion, combustion, color signals, moisture detectors, medical subjects, all require color photography for adequate recording. Complex production graphs and engineering charts also require color for clarity. To

(Continued on Page 212)



Take-off of jet propelled bomb as photographed by automatic camera at Proving Ground. AAF Special Photographic Services Section, Wright Field, Ohio.

CINEMATOGRAPHIC MAGIC FOR "A STOLEN LIFE"

By HERB A. LIGHTMAN

WHEN this year's Academy Awards are announced next March, the leading contenders for top honors in photographic achievement will most certainly include Sol Polito, A.S.C., and the Warner Bros. special effects department for their inspired lensing of the new Bette Davis starring film, "A Stolen Life."

This picture is outstanding for several reasons. Firstly, because it is absorbing, adult entertainment tastefully presented; secondly, because it represents a forceful blending of all phases of production. Critics and students of cinema technique will regard it as a triumph of cameracraft because of the many imposing photographic problems that had to be overcome in order to put this unusual story on film.

"A Stolen Life" concerns a set of twins (both played by Bette Davis), one of whom is a brittle, glittering sophisticate; the other a sincere, genuine, rather plain girl who likes to paint. The two twins appear together in many scenes throughout the film, and it is in these dual-role sequences that the picture rises into a class by itself. The illusion of "twins" is perfect, the effect so convincing that even veteran film technicians admit that it has them fooled. There is absolutely no hint of artificiality or trick-work in these sequences; on the contrary, they are executed with in-

credible smoothness and a complete atmosphere of reality.

Double image effects of this type are, in principle, not at all new. Back in the silent film days the illusion was achieved by means of **split-screen** photography in which only half of the film was exposed at a time, with the actor being photographed first on one half of the frame and then on the other half to give the illusion that he was acting opposite himself.

Later, this obvious and somewhat clumsy technique was replaced by the **traveling matte** process in which an actor was first photographed on a full set with the dialogue and action keyed to allow for the appearance of his "alter ego." Then the same actor would act out the twin role against a black curtain and this image would later be superimposed over the original scene showing the full set. The **traveling matte** process was fairly satisfactory, except for the fact that the superimposed image frequently seemed to have a black line around it.

Recently, more convincing techniques have been perfected, and the ultimate in double-image illusion has been achieved in "A Stolen Life." In shooting this picture, cinematographer Sol Polito crystallized all the advances that had been made to date in this type of filming, and added certain refinements of his own. Discarding both the **split-screen**



SOL POLITO, A. S. C.

and **traveling matte** processes, he utilized a method in which the matte work was done, not in the camera, but in the special effects lab.

To illustrate the general process used, let us take for example a scene from the picture in which Bette Davis is seated in a large chair. Her "twin" crosses the screen and stands behind the chair talking to her. The scene was first shot with Miss Davis seated in the chair while a double went through the actions



FRAME BLOW-UPS from the Warner Brothers production, "A Stolen Life". Left, Bette Davis in her dual role. Right, frame enlargement of one of the most difficult scenes in the picture. This "dolly shot" was made in front of a process screen with Bette Davis walking a treadmill in front of it. She played the scene on one half of the frame, then on the other half. Later, the two scenes were optically blended in the special effects lab. Brilliant special effects by Director of Photography Sol Polito, A. S. C., and his staff produce a perfect illusion of twins.



DUAL ROLE. Bette Davis on left as PATRICIA BOSWORTH—a ruthless, glittering sophisticate who steals her twin sister's man. Right, as KATE BOSWORTH—a sincere, repressed, rather plain girl who likes to paint.

of the twin sister. Then another take was made of the same scene; this time with the double seated in the chair and Miss Davis taking the part of the other twin. In the special effects lab, the parts of both scenes which showed the double were masked out by means of irregular mattes, and the parts showing Miss Davis were then fitted together like an animated jig-saw puzzle, resulting in the illusion that she was playing opposite herself.

In executing this effect the camera had to be securely clamped in place so that the backgrounds would match when the two fragments of the scene were printed together. Dialogue was keyed by means of a playback recording so that all of the action of both twins could be synchronized. The use of a double in parts of the scene to be masked out allowed her shadow to fall naturally about the set, and gave Miss Davis a chance to react normally to the dialogue and movements of another person.

In previous dual-role films, the actor playing the double part was greatly restricted in his movements. He had to remain more or less static and could not approach too closely to his "other self." As far as his overlapping himself bodily was concerned, that was out of the question. In "A Stolen Life," all of these former restrictions have been done away with. The two Bette Davises move freely about with one another, one walking in front of the other. They lie down very close together on the same

bed; one twin touches the other. They cast realistic shadows, and give the perfect illusion of an actual set of twins.

Several scenes presented technical problems that would have seemed to be insurmountable, but Polito and his assistants took them all in stride and produced admirable results. For instance, one scene called for a dolly shot of the twins walking down a long wharf. In the background crowds of people were milling about, crossing the set behind the two walking figures, and creating a good deal of background movement. This scene was shot in front of a process screen with Miss Davis on a treadmill to simulate the walking action. Separate takes were made of her on each side of the screen and the two were blended in the special effects lab. But because the background was moving, extreme care had to be taken to make sure that the background action on both halves would match. Here the blending had to be synchronized down to the last frame, and operation of the rear projector had to be absolutely consistent. A good deal of mathematics and timing entered into the process.

In another scene Miss Davis lights a cigarette for her twin, smooths her hair, etc. This was executed by having Miss Davis play the scene opposite a double who lit her cigarette and performed other actions at close range. Later, in the lab, just the double's face was masked out and Miss Davis' head was literally placed on her shoulders.

Sometimes in complicated scenes in which the twins appeared together, as many as five different irregularly shaped mattes were used to properly match the action. Naturally, all action of this type had to be closely keyed and rehearsed to fit the pace and tempo of the scene. Moreover, from the cameraman's point of view it was essential that the lighting and exposure on both halves of the scene be identical.

Polito emphasizes the fact that the final results produced were no one-man accomplishment. He is indebted to his assistants and to the Warner Bros. special effects department, with special credit going to Art Director Robert Haas and to Russell Collings, A.S.C., for his precise and painstaking work in optically blending the component parts of the dual-action scenes. It was Collings who created the many mattes that were used, matched the halves of the frames optically, and supervised the printing of the composite scenes.

When Polito had finished shooting a greater share of the film, he was suddenly taken ill with appendicitis, and Ernest Haller, A. S. C., stepped in to take over the photographic reins and complete lensing of the picture. Haller's handling of the storm sequence is especially noteworthy. He captured a frighteningly real feeling of horror at sea, an effect brilliantly aided by the work of William McGann, E. Roy Davidson, and Willard

(Continued on Page 210)

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BOARD OF GOVERNORS FOR AMERICAN SOCIETY OF CINEMATOGRAPHERS for the coming year. Seated (left to right): Sol Polito, Lee Garmes, President Leonard Smith, George Folsey, William Skall, Arthur Edeson. Standing (left to right): Second Vice-President Charles Rosher, First Vice-President Leon Shamroy, Gordon Jennings, Secretary Ray Rennahan, Sergeant-at-Arms John Boyle. Other board members not shown include: Fred Jackman, Executive Vice-President and Treasurer, Third Vice-President Charles Clarke, John Seitz, and Joseph Walker.

LEONARD SMITH RE-ELECTED PRESIDENT OF AMERICAN SOCIETY CINEMATOGRAPHERS

L EONARD SMITH was re-elected President of the American Society of Cinematographers at annual election of the organization last month. Smith will lead the Society during the coming year for his fourth consecutive term.

Fred W. Jackman was re-elected Executive Vice President and Treasurer, continuing the dual responsibilities which he has held for several years. Leon Shamroy, Charles Rosher, and Charles G. Clarke were selected to serve as First, Second, and Third Vice Presidents, respectively; while Ray Rennahan was re-elected Secretary, and John Boyle elected Sergeant-at-Arms.

Arthur Edeson, George Folsey, and Jackman were re-elected as members of the Board of Directors; with Gordon Jennings and Charles Rosher voted to serve on the latter body.

Veterans of Cinematography

Members of the A. S. C. Board of Directors for the coming year will comprise: John Boyle, Charles G. Clarke, Arthur Edeson, George Folsey, Lee Garmes, Fred W. Jackman, Gordon Jennings, Sol Polito, Ray Rennahan, Charles Rosher, John Seitz, Leon Shamroy, William V. Skall, Leonard Smith, and Joseph Walker.

All of the officers and board members are outstanding cinematographers of 20 years experience or more in the film industry. Many have won Academy Awards for black-and-white and color

cinematography, while others have productions on the Academy nominations list each year.

Post War Plans for Progress

With new equipment, film stocks, and techniques expected to be available shortly, leaders of the A. S. C. are mapping a complete and comprehensive program for the organization to assist in the testing of such new materials and to make results and findings available to the collective membership. Along these lines is the proposal to install a technical and research building on the present A. S. C. property whereby members—either individually or in groups—will have facilities for experimenting with

new techniques or processes for the advancement of cinematography.

President's Message

President Smith, in continuing to lead the A. S. C. for the fourth year, stated: "I am grateful to the membership for honoring me to again lead the organization—which is the greatest and most progressive camera group in the world. Assisted by such a fine and representative group of cinematographers as represented in the Board of Directors, I am certain that we start on the second quarter-century of operation with brightest outlook for even more startling advances in the art and technique of cinematography."



AMONG OFFICERS WHO WILL LEAD A.S.C. this year are (left to right): John Boyle, Sergeant-at-Arms; Leon Shamroy, First Vice-President; Leonard Smith, President; Ray Rennahan, Secretary, and Charles Rosher, Second Vice-President. Fred Jackman continues as Executive Vice-President, and Charles Clarke holds post of Third Vice-President.

THROUGH the EDITOR'S FINDER

THE twenty-fifth anniversary celebration of the founding of the American Society of Cinematographers, which will be held as an all-industry affair in the Cocoanut Grove of the Ambassador hotel, Los Angeles, on the evening of June 17th; looms as one of the greatest and most representative events of its kind to be presented by Hollywood craftsmen.

Associated artists and technicians of the industry and studios are enthusiastic in extending congratulations and cooperation for the silver anniversary event of the cinematographers, who—down through the years—have contributed so largely to the artistic and technical advances of the motion picture industry.

Guest speakers will include: Governor Earl Warren of California; Louis B. Mayer, head of Metro-Goldwyn-Mayer studios; Darryl F. Zanuck, production chief of 20th-Fox studios; and pioneer producer-director Cecil B. De Mille. Eric Johnston, president of Motion Picture Association of America, will also deliver a brief address if he is on the coast at the time of the event.

Top entertainers of the films and

radio will appear to entertain the members and guests, which are expected to tax the capacity of the large and world-renowned Cocoanut Grove.

Cameramen Always For Progress

TIME Magazine of April 22, 1946, in quoting excerpts of an interview of Emil Ludwig with a Paris publication in which he derides various groups in Hollywood film production activities; did, however, include Ludwig's laudatory comment that "cameramen . . . are the only group whose members have learned their trade." Although Ludwig was only in Hollywood for a relatively brief period, he was certainly most observant in the qualifications and capabilities of the cinematographers he witnessed working on the studio stages or on locations.

Down through the years, it is an indisputable fact that the cinematographers—both individually and collectively—have been the most progressive and inventive artists engaged in motion picture production. Their enthusiasm and inventiveness for practical uses of the

camera, lights, and other accessories connected with motion picture photography; and probings for new uses of such tools, is all intimately wrapped up in the advance of the artistic and technical progress of film production.

Cameramen composed the initial group of production craftsmen who met to form an organization for mutual benefit and the advancement of photographic techniques as a whole. This was back in the days prior to 1915, when the bulk of motion pictures was limited to one, two and three reel subjects. Out of the two original organizations of cameramen—informal setups in New York and Los Angeles—finally emerged the American Society of Cinematographers, now into the second quarter century of operation and accomplishment.

Just as important as the A. S. C. members who function as Directors of Photography on productions, is that large group on the A. S. C. roster who function in the process and special effects departments of the studios and producing companies. Continually working to invent and devise new and more economical procedures to create photographic realism and thrills for pictures, and still always bending to reduce production costs for the company.

Special effects and process is most intriguing in both practices and achievements, which is probably major reason why many cinematographers in that field pass up opportunities to assume charge of regular productions.

A. S. C. Members at Bikini

BRIEF word comes from the Marshall Islands that five members of the American Society of Cinematographers—Art Lloyd, Tom Tutwiler, Harry Perry, Paul Perry, and Major Gilbert Warrenton—are fairly comfortably installed in quonset huts at Bikini, and hard at it in directing preparations for the aerial photography operations which are designed to be a most important factor in the atom bomb demonstration to be staged by combined organizations of the United States Navy and Army in July in the Pacific. The aerial photography program is most complete in scope, combining camera planes of many types and descriptions, including radar-controlled planes with cameras that will turn on automatically over various ships and targets to prevent hazardous flights of pilots and cameramen over the target area.

The five A. S. C. members engaged in the most important demonstration are not only outstanding cinematographers—each with wide experience in Hollywood production—but recent officers with either the Signal Corps or AAF photographic units during the war. Major Warrenton is still on active duty with the AAF.



FRED JACKMAN, re-elected Executive Vice-President and Treasurer of the American Society of Cinematographers for the ensuing year.

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Miniature Camera Models

PFC Gerald R. Olson's Hobby

By IRVING BROWNING

THE greatest diversion in a human life is a hobby, and those who indulge in one will agree with me. I am a hobbyist collector and collect everything movie, even to the magic lantern. I now have enough objects to start and fill a museum. Then, I have a still camera collection which includes all sorts of miniature cameras. Also, I have a collection of unusual lenses and shutters, but this tale is not about my collecting of hobbies but of another unusual hobby, which came about from tinkering in spare time to be practically a paying business.

This hobbyist, Pfc. Gerald R. Olson found his hobby in his love for his work in movies, in which he spent many years in Hollywood. He is now at the Photographic Center of the Signal Corps in Long Island City, New York.

Olson makes interesting objects of his own fancy and he has a particular interest in the Mitchell camera. One day he was toying with bits of wood and out comes a Mitchell camera in miniature. This hobby was developed by his desire to make a suitable gift to the Post Commander, for his personal appreciation for him, so when he completed his first model, he presented it to Col. R. C. Barrett, Commander of the Signal Corps Photographic Center.

Pfc. Gerald R. Olson is a member of Local 44, Hollywood Studio Technicians. He worked at the miniature department of M. G. M. Studios before he entered the service and has been doing miniature work at the Photographic Center, just as he did at M. G. M.

Olson was born in St. Paul in 1911, entered high school and was interested in art. He won the second prize in a contest which included one year's tuition in the St. Paul Art Institute. He left art school to paint in oil and then became in-

terested in modeling, and because of his further interest in aircraft; he has modeled many types of aircraft.

His background is interesting too. His mother was an interior decorator and he worked with her for a while. Then interior decorating became his great aim and he expects to return to that field because he prefers set designing and decorating as a profession.

In 1933 he went to Hollywood hoping to get into the drapery department but was successful in getting a job in the miniature department instead. He worked under Dave Vail at M. G. M.; he also worked for the Lyedeker Brothers at Republic Studios. In 1942 he went into the Signal Corps at Astoria in the drapery and upholstery department. During the war the Signal Corps was producing morale films for the Army and in spite of all the fine subjects that were made there, Olson continued to spend his spare time at his hobby of making miniature cameras.

When the cameramen at the Center saw the first model, there were so many requests for them that Olson took orders and began to work on ten cameras at a time and they went like the proverbial "hot cakes." There were many Hollywood cameramen at the Center who had worked with the Mitchell camera and each one wanted to own a miniature.

Each and every camera miniature requires practically thirty hours of Olson's time to complete, and the only periods he has to give to making them is his spare lunch-time and evenings.

I have seen the Mitchell miniature and from the photographic illustrations on these pages, one can see the minutest details have been carefully executed and every item built to scale. To hold a model in one's hand is to practically believe that the miniature can run. They



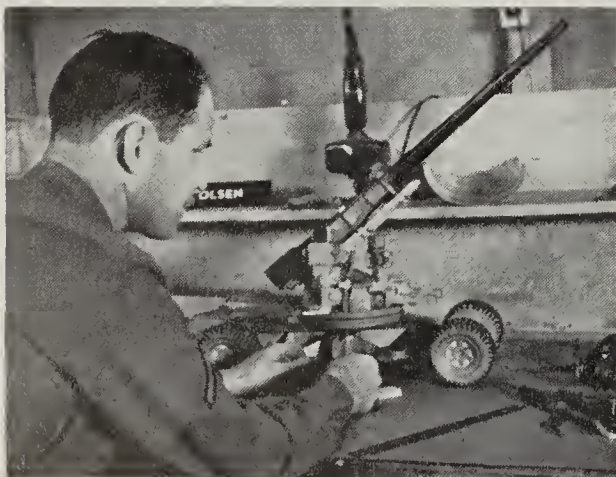
Mitchell camera miniature made to scale by Pfc. Olson, is 14 inches high from base and complete with finder, motor, and lense mounts which are proportionately 35-50-75-100 mm.

are so true to the original, in fact, Olson says that people who see the model, invariably inquire whether it has a mechanism. These miniatures are made entirely of wood—even the sunshade, bellows and lens mounts which look like metal, are wood.

Hobbies can bring profit as well as pleasure and Olson says that he will make them as long as cameramen and others request them; most cameramen delight in owning a miniature.

What an "Oscar" Olson's miniature Mitchell camera would make for Photographic awards!

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PFC. OLSON (left) at work on model of a 120mm. anti-aircraft gun which was used in training film on anti-aircraft. In center is completed gun model, fashioned of wood, tin and zinc. At right are shown models of six-and-a-half ton Army Prime Mover and barrage balloon, also made by Olson.

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Elemental Movie Tricks For The Amateur

By PHIL TANNURA, A. S. C.

(Editor's Note: Because of the numerous requests of amateur movie makers for information on simple trick and process photography which can be accomplished without the necessity of the expensive special effects equipment employed in the Hollywood studios; we are reprinting major portions of article by Phil Tannura, A.S.C., originally published in July, 1944, issue of AMERICAN CINEMATOGRAPHER.)

Reverse Action

ONE of the easiest of all camera tricks—and one of most help for slapstick comedy—is reverse action in which everything appears to happen in reverse: men run backward, automobiles glide ghostlike backwards around a curve through traffic, or water comes out of a glass into a pitcher.

If you have a camera with a crank, you get this reverse result by cranking the film backwards. If you have a spring-driven camera you simply hold the camera upside-down when shooting. Then after your film is developed, cut out the scene and replace it in the reel right side up. You do this by turning it end for end.

Simple, isn't it?

I recommend this only in the case of 16mm, and not for 8mm, because the smaller film has only one row of sprocket holes when ready for projection, and when the film is reversed end-for-end the emulsion side is turned away from the lens and throws the picture out of focus.

Making People Disappear

Another simple, yet effective, trick is stopping the camera to make people and inanimate objects appear and disappear.

Never try to do this unless you have your camera on a tripod. It is also important that you have as near static a background as possible, and for your actors to hold a given position while the camera is stopped.

In achieving this effect you film your scene normally up to the point where you want a person or object to vanish or appear. At that point you tell your players to "freeze" in their positions as you stop your camera. While the camera

is stopped you remove whatever you wish to vanish. Then you continue the normal filming of your scene.

Much fun can be obtained by the substitution of one object for another, such as replacing a cup of tea with a bottle of beer, or a Ford sedan for a Rolls Royce. Try it out and you will have real fun after you have practiced it a few times.

Bombing Effects

Some ambitious amateur may want to make a picture showing the effect of a bomb or other explosion in a house. This can be done with a minimum of danger to your furniture and with great screen effectiveness without wrecking your room.

Just place a metal pan on the floor close in front of the camera. In the pan put a little old-fashioned flash powder. When you are ready for your explosion ignite the flash powder. When the smoke from the powder has obscured the camera's view, stop the camera. Then you scatter the furniture around to suit your fancy. Break lamps or glassware, or do what you want. When your room suits you, ignite some more flash powder in the pan, and as the smoke is clearing resume filming. On the screen you will see the flash of an explosion, a huge cloud of smoke, followed by a wrecked room. It's really very simple.

Distortion

If you wish to get a shot of a scene or individual slowly becoming blurred and distorted you do it this way.

Put a piece of optically flat glass (the type good filters are made of) in your filter holder or matte box. Start shooting your scene normally through this glass. When you want the distortion to start you simply spread some warm sweet oil along the top of the piece of glass and continue filming. The oil will flow down over the glass and as it does the scene becomes more and more distorted.

Some excellent nightmare scenes, or scenes such as an inebriated gentleman might see, can be obtained in this simple manner.

Making a Train Wreck

If you would like to make a picture of a railroad train leaving the tracks you can do it quite easily—and without wrecking the train.

Set up your camera on a tripod at a spot where you know the train is going to stop, with your camera placed so the engine will fill the frame when the train stops. As the train approaches begin shooting. Then, just as the engine completely fills the frame and stops, you jerk one of the tripod legs suddenly sideways and continue shooting. When you see it on the screen it will look as though the engine had come right off the track.

You can add other shots of the cars, making them look as though they were piling up, too. BUT, remember this: in making these shots you must have your camera at angle which does not show the ground.

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Individual Color Evaluations Vary, Scientist Discloses

THERE'S a wide difference in color evaluations by individuals. This fact was disclosed by Dr. I. H. Godlove, color scientist of central research laboratories of General Aniline and Film Corporation in paper presented at semi-annual technical conference of Society of Motion Picture Engineers in New York last month. Dr. Godlove explained that you cannot hope to "see eye-to-eye" with your wife, business associates, or anyone else unless you and they have the same visual response to different color mixtures in the light by which you observe a colored object.

Particularly Applicable to Color Films.

In the filming and processing of motion pictures, it was pointed out, this varying color response of the human eye requires constant study and attention, since color in a motion picture may be viewed by thousands of persons. To satisfy the color appreciation of moviegoers and amateur movie enthusiasts—as well as buyers of fabrics and other consumer goods—producers of these look increasingly to science for the means of achieving the best color characteristics for the average eye.

"One person of normal vision may require 30 percent of red light and 70 percent of green light to match a given yellow," Dr. Godlove stated, "While this proportion may have to be reversed to enable another person of normal vision to make the same match. Moreover, blue-eyed and brown-eyed persons match colors differently. The blue-eyed match colors at one end of the color spectrum, and the brown-eyed at the other end. The match made by the blue-eyed looks

terrible to the brown-eyed, and vice versa."

Color Corrections

Color is a hybrid, Dr. Godlove said, and the job of the colorist is to correlate the two extremes of color stimulus and color preception by means of the intermediate—the hybrid color. He hailed the advance in color science which has enabled trained specialists in this field to devise color scales which solved a wide variety of consumer color problems. These color scales conform to what the average layman sees, thus crystalizing and making more definite the consumer's way of seeing and thinking about color.

Spectral Energy Important

Addressing the same session of the SMPE conference, Ralph M. Evans of Eastman Kodak Co., said that not only the color, but also the spectral energy distribution of the light source effects the colors obtained in motion pictures. For example, he said, a red object may photograph red with a given source of light—while another light source, which matches the first one visually but has a different distribution of energy at the different wave lengths, the object may photograph green. Though the human eye adapts to the color of the light source, he said, this adaptability does not overcome the effect of differences in energy distribution.

Films made for indoor photography are balanced for tungsten light, Mr. Evans pointed out, and adjustments are required to obtain satisfactory results with any light source having a much different distribution of special energy.

defective, Mr. Golden said, and sabotage is suspected in some quarters.

He reported that the studios at Prague, now being operated by the Russians, contain three of the finest stages in the world. Built by the Germans in 1942, two of these stages are 30 by 40 meters in size, and the third is 30 by 50 meters.

Presenting the report that the Department of Commerce investigating team which recently returned from Germany, Harold C. Harsh, of Ansco, who was a member of the team, revealed that the bull-headedness of the Nazi Propaganda Ministry hastened an important advance in German cinematography which may benefit Hollywood and the American movie-goer.

A very significant "first" in the history of photography was established, according to the report, when the German motion picture industry applied the Agfacolor negative-positive method to the production of feature pictures in full color during the war, using monopack film for the first time for both taking and release printing of a 35mm. feature.

"With the beginning of the war, and with no prospect of color motion picture imports from abroad," Mr. Harsh said, "the UFA and other studios were instructed by the German Propaganda Ministry to proceed with the production of feature-length color motion pictures using the Agfacolor negative-positive method.

"During our interview with the UFA people, it was indicated that they had not considered the method ready for feature productions, and proceeded only because of the government directive."

The result of this compulsory and supposedly premature application of the method, however, was the outstanding development in the field of photography in Germany during the war, Mr. Harsh said.

Fundamentally, he said, the method is based on the use of non-diffusing color components in the emulsion layers of a monopack film which, when developed by a special color-forming developer, yields azomethine and quinomine dye images in suit with silver images. The latter are removed during the processing by bleaching.

The method of preventing diffusion of the color components is a patented process which consists in producing dye coupling components that contain a long hydrocarbon chain radical as a part of the molecule, in such a position that it does not interfere to any great extent with the coupling reactivity.

Between 1940 and 1945, Mr. Harsh said, that the Germans used this process in making thirteen feature-length films and about 50 short subjects. Parts of most of the features were viewed by the Department of Commerce mission, he said, and while the overall impression was that the screen quality was inferior to the established American standard, some portions were particularly impressive for the sharpness of the screened picture.

Russia Grabs German AGFA Plant, Process, Equipment

DECLARING that top motion picture technicians in Germany are receiving very attractive offers from the Soviet Government for employment of their skills in Moscow, Nathan D. Golden, chief of the Motion Picture Section of the U. S. Department of Commerce, said at the technical conference of the Society of Motion Picture Engineers in session last month at the Hotel Pennsylvania, New York that Hollywood may expect serious competition from Russia in the film markets of Europe, Asia, and perhaps even in South America.

Head of a Department of Commerce investigating mission which presented a report on the German Agfa Color Film Process at a session of the S.M.P.E. conference, Mr. Golden said the Russians are now turning out about four times as much color film at the Agfa

Film Factory, at Wolfen, Germany, as the Germans did during the war.

Amplifying his statement that Russian offers are being received by German experts in this field, Mr. Golden said it is likely that many of them will go to Moscow, "willing or otherwise."

A substantial amount of technical equipment has also been obtained by the Russians from studios in those sections of Middle Europe which are under Soviet control, he said. At UFA's Templehof Studios and their new Babelsberg Studios, both in Berlin, and at the Rosenhugel and Sievering Studios of the Wein Film Company, in Vienna, he declared, "the Russians left nothing but the knobs on the doors."

Producers in Vienna and Prague have recently complained that some of the film they are now receiving from the Agfa film factory is brittle or otherwise

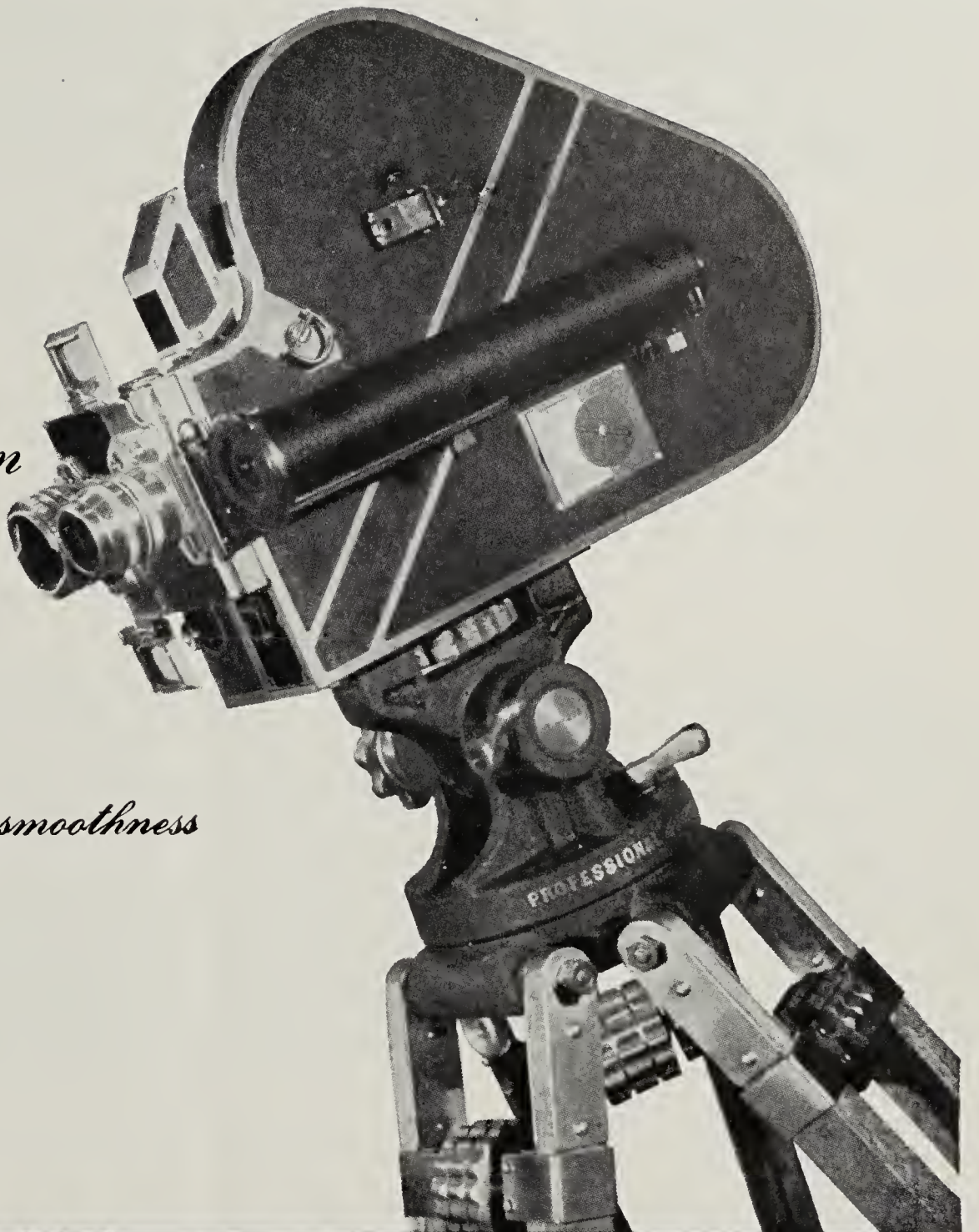
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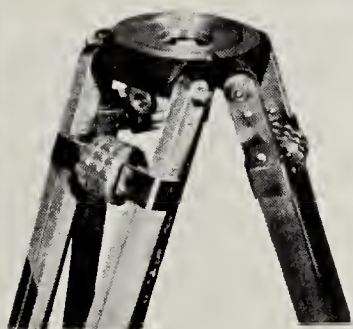
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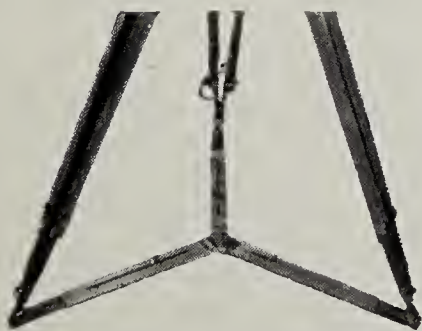
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AMONG THE MOVIE CLUBS

Metropolitan Club

Metropolitan Motion Picture Club of New York City is fast stepping up activities and various types of meetings for benefit of members. At May 10th meeting, held at Hotel Pennsylvania, film program included: "Redouble Trouble," by Walter Bergman, which won first prize in Mount Vernon Movie Makers contest; "Trees That Grow in Brooklyn," by Leo J. Heffernan; "In His Own Judgement," by Joseph J. Harley, winner of the 1944 Hiram Percy Maxim Award; and "Lip Synchronization" with the "Movie-Sound 8," a special demonstration by Lloyd Thompson of the Calvin Company.

Hunter Playhouse was the setting for the thirteenth annual Gala Night of Metropolitan on May 16th; at which time a specially selected program of outstanding amateur films were screened for members and guests. Sixteen millimeter pictures were shown on full size theatrical screen, with projection via a 3,000 watt arc projector. Subjects on the program included: "Interlude in Sunlight," by Martin Drayson; "The Inside Story," by Dan Billman, Jr., "Land Snakes Alive," by Leo Heffernan; "The Dizzy Top," by Ryne Zimmerman; and "While the Earth Remaineth," by Frank Gunnell.

Submission of entries for the novice contest closes on June 3rd, with judging by membership to take place at the annual meeting on June 20th. At the latter session, elections will be held for four members of the board of directors whose terms expire this year.

Cinema Club of San Francisco

Cinema Club of San Francisco held its regular monthly meeting on May 21st at Women's City Club; with dinner preceding to celebrate 15th anniversary of the club's founding. Films lined up by program chairman Larry Duggan included: "Big Bridges," by Duggan; "Bryce and Zion National Parks," by Lloyd Littleton; "Wainright Parade," by Eric Unmack; "Tournament of Roses Parade," by R. L. Plath; and "Hetch Hetchy," by Leon Gagne, which was held over from the previous meeting. Total of 27 members visited the Domoto Nursery at Hayward on club-sponsored trip, and some fine films of the gorgeous oriental peonies in bloom are expected for showings at future meetings.

Brooklyn Amateur Cine Club

May 1st meeting of Brooklyn Amateur Cine Club held at Hotel Bassert featured the annual "Gunnell Nite," with Frank Gunnell presenting his "Al-Fradon Varieties," and "Animal Country," in addition to an illustrated talk on titling. Walter Bergmann returned for the May 15th meeting to present a program of his exceptional films.

Seattle Amateur Movie Club

An uncut film contest is now under way among members of the Seattle Amateur Movie Club, with basic rules stressing the importance of careful planning before shooting of each scene. Entries for 8 mm. division are limited to 50 feet, while the 16 mm. contestants must be submitted within 100 feet. Aside from the splices for white leader, only one other splice is permitted in each subject submitted for the contest. Closing date will be set for several months hence, with winning entries in the two divisions to receive awards at club's annual dinner in December.

"Brookside," a 400 foot kodachrome production from ACL, featured the film program at May 14th meeting, which also included a discussion on various brands of cameras and projectors by members.

Parkchester Cine Club

Parkchester Cine Club of the Bronx, New York, is presenting its fifth annual movie show on evening of June 6th at St. Helena's church auditorium. Program, all films being made by club members, includes: "Old Fort Niagara and the Mighty Falls," by Henry F. Goebel; "Bryce Canyon and Yosemite," by Alec Grossman; "St. Helena's on Parade," by John Arricale and Oscar Woelfle; "Eleanor at the Zoo," by Herbert Oesterle; and "Variety," premiere of a vaude show subject by George Kirstein. During the war, Parkchester members made several documentary films for Metropolitan Life Insurance Co.

La Casa, Alhambra

A. J. Zeman was chairman of the May 20th meeting of La Casa Movie Club of Alhambra, Calif., which presented a program of films through the courtesy of Pasadena Movie Club. Pictures included: "Snake and Dog," by Bert Sault; "Tournament of Roses," by Pasadena Movie Club; "Monument Valley," by Floyd Rittenhouse; "Nerine the Lily Beautiful," by A. Foster; and "Monarch Butterfly," by A. Fox.

Amateur M. P. Club, St. Louis

Members of Amateur Motion Picture Club of St. Louis enjoyed an extensive program at meeting held at Roosevelt Hotel on April 9th, with films projected including: "Yellowstone," by Arthur Bangert; "Holiday in Hollywood," by Frank Sperka; "Christmas," by Lon Wadman; "Taken for a Ride," loaned by Stamford, Conn. club; "Expectant Father," by George Valentine of Glenbrook, Conn.; and "Canadian Holiday," loaned by Joseph Hollywood of New York. At the April meeting, the club voted to raise dues from four to six dollars annually.

L. A. Cinema Club

Splendid program of films featured the May 6th meeting of Los Angeles Cinema Club, held at the Ebell Club with president Harry E. Parker as chairman. Highlight of the film program was showing of the AAF "Last Bomb" for the first time before any amateur movie club. Royal R. Moss presented his reel of "local color" shots which proved to be very spectacular; while Guy D. Haselton exhibited his "Inside Passage to Alaska." Paul E. Wolfe gave a most entertaining talk on his experiences as a police and news photographer.

Secretary-treasurer Jack Shandler announced a new club development whereby certificates will be issued to members traveling abroad, designed to secure for them easier access to desirable photographic locations and subjects. First of a series of technical session headed by Lorenzo Del Riccio presented brief talks by Karl Freund, A.S.C.; Hartley Harrison; and R. A. Buckley.

Philadelphia Cinema Club

Frank E. Gunnell, FACL, was honored guest with his wife at the May 14th meeting of Philadelphia Cinema Club held in auditorium of Witherspoon Building. In addition to exhibiting his Hiram Maxim award winning picture, "While the Earth Remaineth," Mr. Gunnell also showed his "Down Mexico Way" and "Sahuaro Land," after which he gave a talk on the making of better movies. Meeting generated turnout of many prospective members to add to the large number of clubites present.

Utah Cine Arts Club

Regular monthly meeting of Utah Cine Arts Club of Salt Lake City was held on evening of May 15th, with film program and technical session for member information providing a most interesting session. Films shown included: "A Letter to Marjorie," by Dr. C. Elmer Barratt; "Atwood," by Kermit Fullmer; and "Nature's Art Gallery," Union Pacific kodachrome subject displaying the scenic wonders of the Bryce and Zion canyon districts.

Westwood Movie Club

George Loehrsen functioned as auctioneer at the gadget auction of Westwood Movie Club, San Francisco, at meeting held on April 26th. Loehrsen, also film program chairman, lined up group of pictures around the general title of "Filming the Family." Films included: "Sandra," by Ed Sargeant; "Barney and Graduation," by W. C. Johnson; "Christmas," by I. A. Kitzenberger; "Delightfully Yours," by Frank Boichot; and "Family Album and April Wedding."



THEY'RE BACK!

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HANDSOME in appearance, convenient in use, Ciné-Kodak and Kodascope carrying cases are built to make movie making or screening easier . . . to afford real protection to filming and projecting equipment.

Easier—because many carrying cases take Ciné-Kodak or Kodascope and a variety of accessory equipment . . . because you're ready for movie making or showing anywhere, at a moment's notice.

Protection—because cases guard your precision movie equipment against weather and

run-of-the-mill jolts and bumps . . . because they prevent dust collection that can dull movies or scratch film.

And, because Kodak-made cases are built for a specific camera or projector, they're space-thrifty and convenient—each piece of equipment fits because the case is built that way.

Yes, carrying cases have joined the return of Kodak movie equipment—in a choice of styles for some Ciné-Kodaks and Kodascopes.

Many are available right now at your Ciné-Kodak dealer's. Better see him—soon.



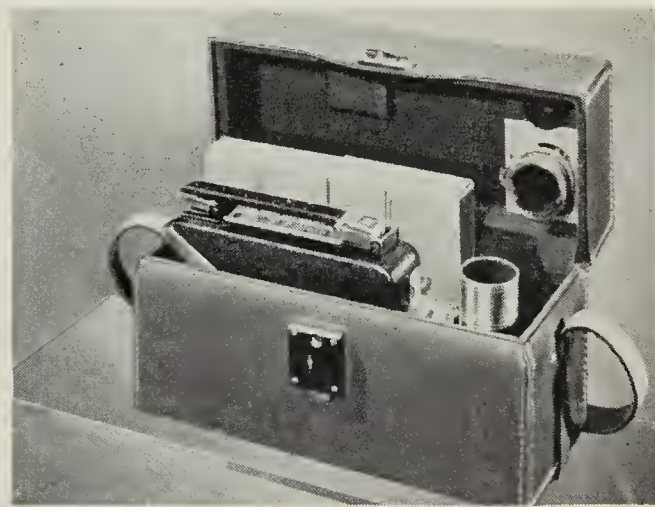
Standard Case for the Ciné-Kodak Magazine 8 is built of handsome top-grain cowhide . . . takes camera and two extra film cartons. An extra length of strap permits over-the-shoulder or hand carrying.



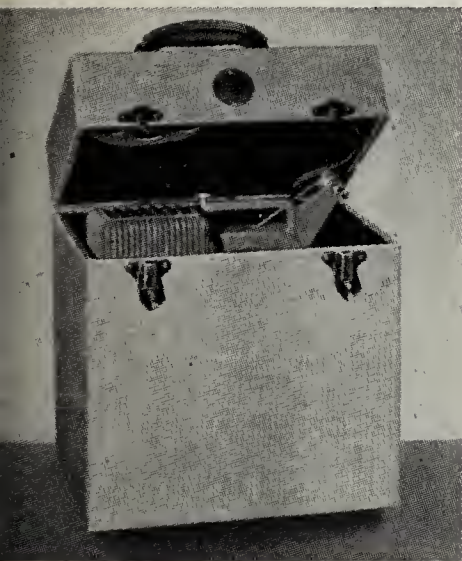
Combination Case for the "Magazine 8" is constructed of finest cowhide . . . holds camera, two accessory lenses, extra film magazines, Focusing Finder, and a full complement of Lens Attachments.



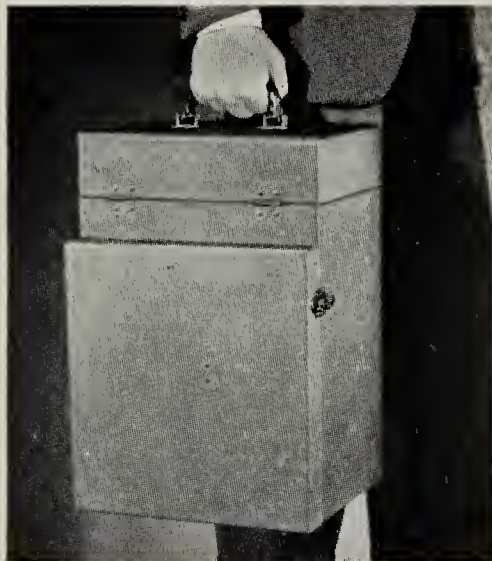
Soft Leather Case accommodates either Ciné-Kodak Magazine 8 or 16. Of morocco-grain leather, the Soft Leather Case is of pouch-type construction with a zipper closure.



Combination Case for the "Magazine 16" takes camera, two telephoto lenses or the wide-angle lenses and adapter, a filter or supplementary lens in W mount, and two extra film magazines. The Combination Case is built of handsome, durable cowhide.



Far left: **Carrying Case for Kodascope Eight-33** is light but sturdy . . . built to stand up in use. And it's handsome in appearance, too . . . finished in airplane-luggage cloth.

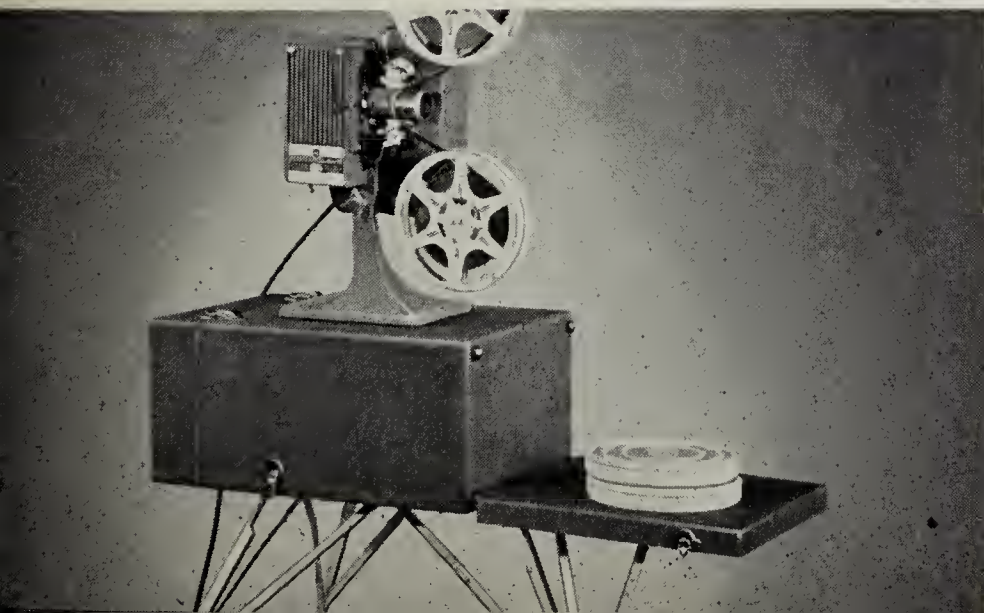


Left: **Projecto Case for Kodascope Sixteen-10** doubles as carrying case and waist-high projection stand. Here's the case packed, the entire assembly enclosed in a compact carrying case. The legs fold easily into the compartment pictured on the near side.

Left: **The same case** in use as a projection stand for both Kodascope and film reels and cans. Readily set up, the Projecto Case for Kodascope Sixteen-10 provides a waist-high projection stand—just the right height for convenient use. Well-designed, sturdy construction makes it a rock-steady base for the projector . . . makes it a case that really adds to the pleasures of movie screening.



Compartment Case for Ciné-Kodak Magazine 16 accommodates a wide variety of accessories . . . fills the needs of the movie maker who has or anticipates owning a full complement of auxiliary equipment. Cowhide construction makes it tops in appearance.



EASTMAN KODAK COMPANY
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Kodak

Cinematography Magic

(Continued from Page 197)

Van Enger, A.S.C.,—all of the Warners' special effects department.

In addition to the obviously high quality of the trick effects, it can also be said that the caliber of general photography in "A Stolen Life" is far above average. Polito managed to inject mood by means of straight-forward yet atmospheric treatment of the subject matter. In one exterior sequence he used a combination of fog and harshly realistic lighting to produce a flat grey effect very well suited to the key of the action at that particular point in the story.

The entire film evidences a generous amount of production value and shows fine attention to detail in every department. Requiring six months of continuous shooting, and utilizing thirty-six major sets, the film establishes the rugged New England coast as a provocative setting for dramatic action. In reality, these sequences were shot at Laguna Beach—a swank, colorful, seaside artists' colony not too far from Hollywood. But the locales were selected with care and have a genuine rockbound Yankee character about them. During filming of scenes at this location, natives of Laguna were delighted to see a lighthouse take shape on a small island just off the mainland. They had been campaigning for just such a lighthouse for years; but they were sadly disappointed when, after two weeks of shooting the prop cardboard lighthouse was dismantled, packed up, and sent back to the studio.

Further location trips were made to Monterey and to Long Beach, where airport footage was shot. In addition, two complete New England towns were constructed on the back lot—one a simple fishing village, the other a pleasure resort erected on "Lake Warner." Here a full-size ferry boat was built upon iron trucks moving on rails beneath the surface of the water.

From the audience standpoint, "A Stolen Life" should play a merry tune at the box-office. From the technician's standpoint it proves that teamwork in production shows up favorably on the screen. In presenting something truly unusual and outstanding in the way of cinematographic special effects, it emphasizes the point that the purpose of such effects is not to fool an audience, but to place on the screen as an integral part of the story an illusion of reality that could not be effectively achieved in any other way.

Monson Ansco Trade Advisor

Harry Monson has been appointed to newly-created post of special advisor on trade relations by Ansco. Recently district manager for the company in Chicago, Monson is veteran of 42 years in the photographic business. Harold A. Edlund takes over the Chicago post for Ansco.



A scene from the violently realistic storm sequence of "A Stolen Life", produced with the aid of process backgrounds, wind machines, and 90,000 gallons of water released from "typhoon chutes".

Armat Honored by SMPE

Thomas Armat, inventor of the first projection machine employing a loop-forming means and giving the film longer period of rest and illumination than the time required for movement from frame to frame, was presented with a Scroll of Achievement at semi-annual technical conference of Society of Motion Picture Engineers last month in New York. Presentation to Armat was on 50th anniversary of his first exhibition of his projector at Koster and Bial's Music Hall, New York. Albert Warner accepted achievement scroll presented to Warner Brothers for pioneering leadership in the development of sound motion pictures, 20th anniversary of which is being celebrated for the next several months.

Los Angeles Eight

Entries in the Los Angeles 8mm. Club's 50 foot contest were exhibited at May 14th meeting held in the Bell & Howell auditorium. Sylvia Fairley's "There Ain't No Justice" was the winner; second honors went to "Swim Meet" by Fred Evans; while "Bringing Down Father" by L. B. Reed won third prize. Contest committee chairman William Wade also showed his "Hello, Honey, How Yo' All?", which he filmed on a recent trip through the deep south.

Club's first outing of the year will be staged June 2, with members journeying to Charlton Flats on the Angeles Crest Highway for combination social and filming activities.

Westwood, San Francisco

Program of nationally-famous amateur films and contest winners was presented by Westwood Movie Club of San Francisco on May 24th at Aptos Junior high school auditorium for members, guests and the general public. Pictures included: Frank E. Gunnell's "While the Earth Remaineth," "Grand Canyon," by Fred Harvey; "Chromatic Rhapsody," by Robert P. Kehow; and "Outside the Big Top," by Guy Nelli.

PSA Organizing Movie Division

Organization of a motion picture division for the benefit of PSA members and other amateur cinematographers and their clubs has been announced by the Photographic Society of America. Acting chairman of the new division is Harris B. Tuttle, of Rochester, who is an Associate of PSA and Fellow of the Royal Photographic Society and of the Society of Motion Picture Engineers.

The new Division, which takes its place beside PSA's Camera Club, Color, Historical, Nature, Pictorial, Press, and Technical Divisions, will sponsor authoritative articles in "PSA Journal," arrange for club interchange of amateur productions, and report on the use of equipment and methods of interest and aid to amateur movie makers. The division plans to cooperate with the Amateur Cinema League, Society of Motion Picture Engineers, and the American Society of Cinematographers, and to provide material of interest to operators of 8mm. and 16mm. equipment.

Organization of the division has been planned for some time in an effort to provide PSA members with complete photographic service, but was interrupted by war. The first 100 PSA members to become affiliated will be recognized as charter division members.

GE Photolamp Data Sheet

Essential data pertaining to all G-E lamps used for photographic purposes have been compiled and highlighted in a new free folder published by G. E. Lamp Department at Nela Park, Cleveland.

Departmentalized by subject, the folder permits the user to quickly put his finger on any desired bit of photolamp information. It represents an enormous amount of photographic information boiled down to "sugar" in the form of time-light curves, exposure and lamp specification tables, photos, and charts.

You Can Bring Talking Pictures Into Your Home



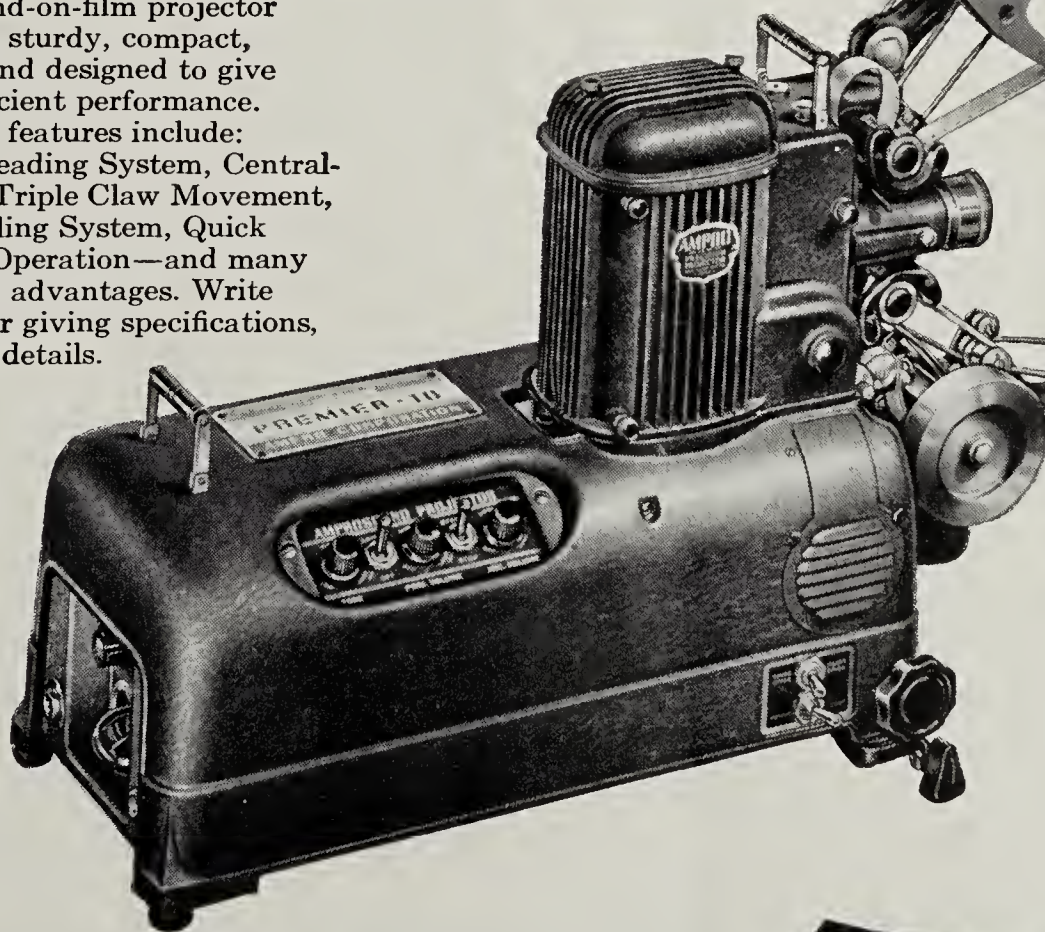
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Specialized Photography

(Continued from Page 195)

make the color records of value, they must be capable of being printed for reports, so an extensive color printing service has been instituted which can turn out as many as 500 prints per week. The original transparencies are processed in our own laboratory. The color prints are made by direct contact, or by enlargement from the original transparencies and are also entirely processed with our extensive facilities.

The organization is constantly experimenting with new problems and applications for enlarging its scope and attacking new problems. New applications of infrared, x-rays, photomicrography, radar, stereoscopic processes, cathode-ray oscilloscopes are constantly being tried to discover new approaches for the solution of problems presented to this organization. The limits of photography as an aid to engineering have by no means been reached.

High-Speed Photography

High-speed photography as practiced at Wright Field may be conveniently divided into 2 general classifications: high-speed motion pictures, high-speed still pictures. Each of these may be subdivided into qualitative records and quantitative studies.

High-Speed Motion Pictures

Continuous Light—To make the high-speed motion pictures, several pieces of equipment are in use. The Western Electric Fastax camera, in both the 8-mm and 16-mm sizes, is used for the bulk of the projects. Although the Eastman Type III 16-mm camera is gaining favor, each camera has certain advantages for various types of problems.

These cameras operate on the principle of continuous film motion, the individual frames being defined by a glass prism which, by rotating, moves the image formed by the camera lens along with the advancing film.

The definition obtained with this type of optical compensation is not as good as with the standard intermittent motion, but it is adequate for any but the smallest detail. The best use of these cameras is made by filming close-ups of the most important action and in this way not depending upon rendition of small detail.

At full speed, the 100-ft. of film take about 1½ to 2 sec to pass through, so exact timing of the starting of the cameras is essential. It is all too easy to have the important action occur after the film has passed through the camera.

In one application where it was desired to record the final velocity of a cart falling in a vertical track, a switch was installed on the track to turn the camera on just before the cart appeared in the picture, thus assuring that the camera would be running at that time. The switch was then moved up the track until the camera started ½ sec before the cart arrived in the scene. In this way the camera was allowed to

come up to its full speed of 4000 pictures a sec before the cart appeared.

To measure the velocity of the cart it was necessary to determine the distance traveled in a certain time. The track was marked in one-inch distances by painting the track white and laying on strips of black scotch tape one inch wide every other inch. To improve the accuracy of the measurement a vernier scale was painted on the cart so it would move along the track markings. Thus a reading every tenth of an inch could be made.

The time record on the film was made by means of a 200-cps spark originating in a vibrating-reed timer built for the purpose by our organization. A vibrating reed has its output voltage stepped up by a transformer to a point where it trips the grid of a Strobotron tube. The output of the Strobotron is put through a spark coil on the camera which is connected to the sparking electrode in the camera body. A spark flashes against the film sprocket, the light of the discharge making a small fog mark on the edge of the film every 5 milliseconds.

Thus time and distance were recorded on the same film from which velocity may be calculated. By drawing the curve of velocity against time it is possible to take the slope of the curve at any point and so calculate acceleration.

In this way a complete record is obtained not only of velocity and acceleration but of the appearances of the action in slow motion for visual study.

Lighting of the subjects to the required high intensity is provided by R-2 photofloods of small objects and up to 10,000-w units for larger areas. In bright sunlight, a maximum of 2000 frames per sec is all that the light will permit and still produce adequate exposure from light-colored subjects. For higher camera speeds, the subject must be illuminated with additional lighting units. A light truck equipped with four 3200-w floodlighting units and provided with its own generator was found to be a useful item for work in the field.

Processing

Because the exposure per frame of films made with the Fastax or Eastman Type III cameras is of the order of 1/5000 sec or less, the films are normally on the underexposed side. Special processing to obtain a printable film density is usually required. A fresh D-76 formula gives good density provided the development is carried from 30 to 60 min. To reduce the time of development, a more energetic print type of developer will cut the time to about 7 to 10 min. With this stronger developer it is necessary to use an anti-foggant to hold down the background fog; 6-nitrobenzimidazole has been found very effective for this purpose.

Removal of the opaque backing from the film has been found relatively easy with Eastman Kodak Super XX by a simple squeegeeing with a viscose

sponge during final washing. The film must be doubly perforated similarly to "double eight," as usually supplied for 8-mm cameras. It is spooled in 100-ft. lengths and is a reversible-type film although we develop it as a negative for convenience and extra speed.

In the laboratory, rack and tank development has proved more practical than machine processing because of the long developing time required to obtain sufficient image density. In the field a G-3 tank is capable of producing good results. The roller in this tank is replaced with a viscose sponge to aid in removing the backing from the film. A collapsible drying rack designed for the Air Corps is a convenient accessory to hold the film while the moisture is evaporating from it.

Analysis of the Film

After processing, the film must be studied for information that will enable performance curves to be drawn for the subject under analysis. The timing marks along the edge of the film are usually reduced to a frames-per-second figure for important parts of the film where the action occurs. Where the whole film is to be analyzed, a curve is drawn of film length measured in feet from the beginning of the film against frames per second. In this way, the time interval measured from one frame to the next may be taken off the curve for any part of the reel while it is measured on a footage counter.

The action is viewed frame by frame with special projectors originally designed to analyze gun sight aiming point camera records. The image may be projected on a screen up to exactly original size and measurements of distance thus made directly on the screen. By interposing a mirror in the beam of the projector and reflecting the image back toward a translucent screen near the projector, the analyst may operate the projector and measure the screen without leaving his chair. A scale on the floor along which to slide the mirror enables the operator to consult a table and so enlarge the image to any desired extent without trial and error by setting the mirror at predetermined distances from the screen.

Large transparent protractors and scales to use on the screen enable the analyst to work quickly and accurately. After the points for the velocity curve have been plotted, a special tangent scale devised by our chief analyst is used to obtain the points to plot the curve of acceleration.

Achievements with the High-Speed Cameras

While the films made with high-speed motion picture cameras often appear spectacular, it is usually the more prosaic looking picture that produces the most significant results. The close-up of a wheel on the landing gear of a B-24 during the process of making contact with the ground during an actual landing is very dull screen fare, but it

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yielded curves and figures that explained a great deal about the flexures a tire undergoes during the violent impact at landing.

Studies have been made of aircraft machine gun malfunctioning which proved the correctness of the theory of one of Wright Field's experts and revised the thinking of the gun manufacturers.

Under the analytical eye of the high-speed camera have come aerial camera shutters, jet propulsion engines, bursting propellers, exploding oxygen containers, explosively operated radio antennae, electrical relay actions, manual gun charging operations, aircraft launching devices, and a host of other engineering projects.

Intermittent Light High-Speed Motion Pictures

Another important piece of equipment in use is the Edgerton flashing light high-speed camera. As is well known to most engineers in this field, this camera utilizes special gaseous discharge lamps whose flash is so short that it stops the action not only of the subject but of the continuous moving film in the camera as well. The film is 35-mm in width and 100 ft. long. The film passes through the camera in $1\frac{1}{2}$ sec when the driving motor is set to full speed, taking 1500 pictures per sec. A contactor on the main sprocket wheel fires the lamps every time a new frame is in position back of the aperture plate.

A spark electrode in the Edgerton camera places a time record on the film so that time duration, velocity, and acceleration may be measured.

Incidentally, a comparison of the 3 types of high-speed cameras — the Fastax, the Eastman, and the Edgerton — brings to light the fact that 100 ft. of film passes through each in $1\frac{1}{2}$ sec at full speed. The linear film velocity is the same, therefore, in each camera, the different frames per second rates being a result of the difference in frame size.

The Edgerton camera can be used only in subdued light because the lens is open all the time; therefore its operation is restricted to laboratory applications. The shortness of the flash, which amounts to $1/100,000$ sec, and the relatively large frame size compared to the 8- or 16-mm films made by the other cameras make possible the recording of greater detail in the pictures. Single frame enlargements up to 8×10 in. of the important phases of the action are readily made for inclusion in reports, a valuable aid in explaining data.

Because of the shortness of the flash, normal speed films are barely exposed. Even the fastest films leave a great deal to be desired because the severe reciprocity failure of the film reduces the effective exposure considerably. The blue color of the discharge lamp's flash utilizes only a portion of the wide spec-

tral sensitivity of the fast panchromatic emulsion.

Adding all these restrictions together pointed to the need for finding a high-speed blue-sensitive emulsion that could be developed vigorously. A blue-sensitive film made especially for recording the fluoroscopic screen of x-ray apparatus was finally adopted as incorporating all the features desired. This film still has to be developed for 30 to 60 min but the results are reasonably satisfactory.

The coolness of the flashing light technique, as contrasted to the incandescent glare of the continuous light camera, indicates that for biological pictures and subjects whose actions would be affected by temperature rise, the Edgerton equipment would prove superior. It can, however, photograph only relatively small objects because of the low light output.

The continuous light cameras are lighter, smaller, cheaper, and simpler to operate and will make pictures in daylight. Each type of apparatus has its particular advantage and application.

Sequence Flashing

Some actions are too fast for even the high-speed cameras to catch. What is more, the bursting of an airplane propeller under increasing speeds cannot be anticipated, so it is impossible to start a motion picture camera in time to be operating at full speed at the exact moment required. Even if the camera were operating at the proper time, it is doubtful if more than two frames would record the action. A different technique had to be evolved to handle problems of this nature.

If a series of electrical discharge lamps were lined up and their condensers charged, they may be fired in sequence at almost any rapidity desired. For relatively small but fast objects such as bullets, 6 Edgerton micro-flash units were assembled. These units emit a flash of light whose duration is $1/500,000$ sec. The condensers in each unit require several seconds to charge from a 7000-v supply, but once charged the units may be fired one after the other in rapid succession.

A sequencing device was designed and constructed that would fire each lamp in turn electronically from $1/12$ sec to $1/20,000$ sec between flashes. By means of a microphone feeding into an amplifier, the sound of the gun initiates the sequence and the lights flash in succession. Of course, the picture is made in darkness, the flashes of light exposing the film. The picture is taken on an ordinary still camera loaded with fast blue-sensitive film which is developed vigorously. In this way pictures of bullets may be photographed striking armor plate and shedding their jackets. A series of bullet images appear in one picture showing successive stages of the action.

Although the microflash units have a relatively short range and angle of spread, helicopter rotors up to 38 ft. across have been successfully photo-

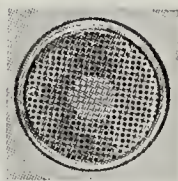
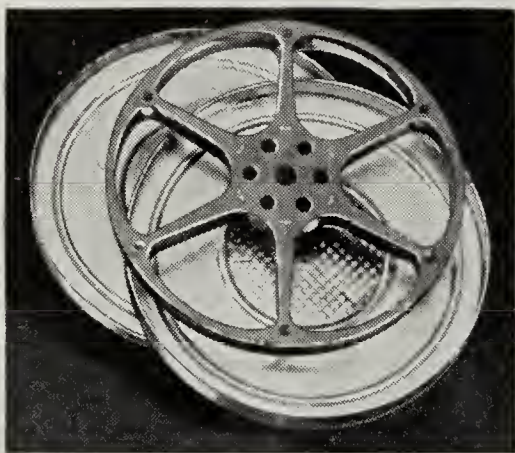
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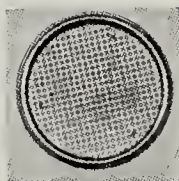
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graphed during rupture. To accomplish this end, the blades were painted white, a fluoride-coated f/2.5 lens was used on the camera, and the fast fluorographic film developed to completion. Ten minutes in straight D-72 with an antifoggant added is not unusual to bring up an image adequate for printing.

In the case of the helicopter propeller rupture, a wire was cemented to the blades and brought out through a slipping device normally used to connect strain gauges to recording instruments. The wires were connected to a transformer and battery in series. The secondary of the transformer was close to and connected into the input of the triggering amplifier. The transformer enabled the circuit comprising the rotor and slip-ring to retain a low impedance and so be relatively free from pickup disturbances. The rupturing of the rotor broke the wires and initiated the sequence of flashes.

Because the camera with its fast lens and film was set for time exposure to catch the moment of rupture, the whole propeller test laboratory had to be darkened completely. Windows that could not be covered in the enclosing structure made it necessary to perform the test only after darkness fell. One of the first pictures made with this equipment shows pieces of the fabric blade flying away from the rotor. The success of the results obtained so far has war-

ranted the building of a new sequence flasher of far greater light output to be permanently installed in the propeller test laboratory for continuing research.

Flash Techniques

In some cases where the action is continuous, pictures are required at intervals that do not approach motion picture frequency and yet each picture must be made with extremely short exposure. An actual case was a helicopter hovering above the ground. Pictures of the blades were required to determine coning angle and bending.

An aerial night photographic flash unit was adapted to ground operation for this purpose. This unit emitted an extremely powerful flash of light whose duration was only 1/5000 sec. The flash could be repeated 3 times a sec. An aerial camera taking a 5 × 7-in. picture had its shutter removed and its mechanism altered to move the film continuously. The lens was set into a focusing mount and the camera set upon a Mitchell tripod. A contactor was installed in the camera to flash the light every time a fresh 5-in. length of film came into position.

When darkness fell on the flying field and everything was in readiness, the helicopter pilot was given the signal to make the aircraft rise to a hovering position. At the same moment, the camera was started and the light was fired by the film metering rollers inside. A series of pictures was thus ob-

tained showing the blades of the helicopter sharply defined against a black sky. Measurements could then be easily made of the angle and deformation of the blades.

Individual flash pictures may, of course, be made with the same equipment. An example of such an application was the request made by the Propeller Laboratory to photograph the successive stages of the building up of ice on a propeller. The request stated that this was not to be done in the wind tunnel but must be accomplished under actual icing conditions in the air. To complicate matters further, it was considered too dangerous to make the flight at night, sufficient hazard being encountered during daylight operations in icing clouds.

The problem was finally solved by the combination of several techniques and the development of a new discharge lamp. The regular lamp of the night photographic unit was replaced with a short duration tube. This tube flashed in about 1/20,000 sec. To make the picture, a wide-angle camera was constructed which could be operated entirely from the rear and so rigid that it would keep its focus despite the vibration of the airplane. A contactor was fitted to the shutter to fire the flash when the blades were wide open. In this way, the effect of daylight would

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be kept to a minimum with a high shutter speed.

The camera and lamp were installed in the cockpit of the B-25 Mitchell bomber directly behind the pilot, viewing the blades of the propeller perpendicular to their axis of rotation. The success of the whole project depended upon 3 factors: (1) overpowering the daylight with flash, (2) a fast enough flash to stop the propeller, and (3) sufficient contrast to be obtained between the cloud background and the propeller blade to show the latter to its best advantage.

To achieve the last requirement, color contrast was tried and found to be of considerable help. Ansco Color Film was loaded into the camera and the propeller blades of the airplane painted bright red. The name of the B-25, *Flaming Mamie*, was no meaningless term as one glance at the flaming color of the propeller would prove.

Motion Picture Theodolites

Recording theodolites are used effectively at Wright Field for the location in space of moving aircraft, parachutes, and slow-moving missiles. The recording theodolites are essentially motion picture cameras whose azimuth (panorama from the north point) and site (tilt from the horizontal) are recorded on the film simultaneously with the picture. A clock is also recorded for the purpose of matching pictures taken at the same time from 2 stations. The theodolites are always used in pairs so that triangulation from their 2 positions defines the position of the subject. The clocks on the 2 instruments may be synchronized by radio so that accuracy in timing is assured. From the observations recorded by these theodolites, three-dimensional space graphs may be plotted to depict the exact motion of an object in the air.

With these instruments, the flight path of a helicopter was recorded and plotted to prove that such an aircraft requires some wind to produce vertical ascent. The oscillations and drift of a parachute were also measured.

Conclusion

Motion picture technique has been put to work in the ways enumerated to aid in the solution of engineering problems at Wright Field, the experimental center of aircraft development for the Army Air Forces. Under the pressure of war, the satisfactory solutions to these design problems had to be found quickly. The success which attended the application of these new photographic analytical methods was so complete that this work is expanding to an ever-increasing extent.

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Mr. Zucker stated, "It has always been the policy of Camera Equipment Company to bring to professionals and amateurs alike the finest camera equipment that can be made. All new materials such as DowMetal, which is now used for many Camera Equipment parts, gives our equipment new strength and lightness. To assure long life for equipment, all parts that undergo severe usage are made of finest heat-treated steel and in many cases extra-hard bronze.

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Seager Joins Ansco

Charles W. Seager has been named to head the professional motion picture products section of Ansco's Binghamton sales staff.

San Francisco Westwood Sets Active Program

The Westwood Movie Club of San Francisco has started the 1946 amateur movie makers season with a bang! Under the expert leadership of Fred Harvey the January dinner, held in one of San Francisco's leading restaurants, was attended by 75 members and guests. The February meeting was devoted to demonstrations of colored film by the Ansco people. The March meeting was devoted to a very interesting and educational demonstration of sound on wire.

During the month of May, the Westwood Movie Club will attempt its first civic project of any size. One afternoon will be devoted to showing 16mm amateur movie films to the pupils of the Aptos Junior High School. In the evening an entirely new show will be put on in the Little Theater of the Aptos Junior High School for the entire community. Over 1,000 people are expected to attend.

Classes are now being formed to instruct beginners in the use of their equipment, how to take pictures, how to make titles and all phases of motion picture photography. This promises to become one of the most outstanding projects of the club.

All amateur motion picture makers in the San Francisco Bay area are invited to attend the meetings which are held on the last Friday of each month in the club room at the St. Francis Community Hall, Ocean Avenue and San Fernando Way, San Francisco.

Ansco Perfecting Faster Color Negative

The means for producing a color negative film with a speed comparable to average black-and-white films was announced by research scientists of General Aniline and Film Corporation and its Ansco Division, meeting in a special research forum recently.

The new film, of which only small experimental coatings have been made, is about 50 per cent faster than any color negative film at present generally available. Its speed corresponds to a Weston rating of 32 or G. E. 48.

The new fast color film, discovered cooperatively by chemists and scientists of Ansco and General Aniline in the experimental work on color negative, is achieved through a combination of several factors, including emulsion techniques, and the development of new color forming substances.

Availability of the new fast color film will depend on experimental work now being conducted, an Ansco spokesman said. He pointed out that, although test exposures under varying conditions had been highly satisfactory, a full exploration of the possibilities of the new techniques is in its initial phase.

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New Filmo Sound Library Releases Announced

THE MERRY MONAHANS (Universal) 9 reels

A cavalcade of vaudeville leading from the three-a-day to the Follies. Excellent comedy, music, and a pleasant dash of nostalgic sentiment. One of the better films. (Donald O'Connor, Peggy Ryan, Jack Oakie) Available from March 15, 1946 for approved non-theatrical audiences.

SAN DIEGO, I LOVE YOU (Universal) 8 reels

An ambitious girl can get places even when weighted down with four obstreperous kid brothers and a dreamy school-teacher father who turns inventor. Good clean comedy. (Jon Hall, Louise Allbritton, Edward Everett Horton, Eric Blore, Buster Keaton). Available from March 29, 1946 for approved non-theatrical audiences.

WHAT BIRD IS THAT? 3 reels

Teacher-made color films of American bird life, arranged in novel form to encourage student participation. Each bird is pictured in typical habitat, size, feeding and nesting habits, and other distinguishing features are shown—then a pause for discussion, and the answer is given. A quick review concludes the reel. Producer David Schneider, editor Wm. F. Kruse.

THE SINGING SHERIFF (6 reels)

A truly unique musical Western that kids itself in clean uproarious satire. There is rhyme and reason even in the introduction of the musical numbers, and an inspired commentator helps further to take it off the beaten path. (Bob Crosby, Fay McKenzie, Samuel S. Hinds, Fuzzy Knight) Available from April 6, 1946 for approved non-theatrical audiences.

BOWERY TO BROADWAY (Universal) —9 reels.

Two rival Irish showmen battle all the way from the Bowery to Fourteenth Street and finally to Times Square. "Show Business" excellently and amusingly shown. (Jack Oakie, Susanna Foster, Turhan Bey, Ann Blyth, Maria Montez, Donald O'Connor, Louise Allbritton). Available from May 3, 1946, for approved non-theatrical audiences.

RECKLESS AGE (Universal)—6 reels.

Poor little rich girl runs away to become a salesgirl in one of her own chain stores—for a lot more fun plus business, romantic and other complications. (Gloria Jean, Henry Stephenson, Judy Clark, Franklin Pangborn). Available from May 17, 1946, for approved non-theatrical audiences.

ENTER ARSENE LUPIN (Universal)—7 reels.

Famous fiction character excellently portrayed in new thriller that involves a fabulous emerald, a pretty girl, romance, rescues and a police inspector almost, but not quite, smart enough to

catch the Robin Hood crook. (Charles Korvin, Ella Raines, J. Carroll Naish). Available from May 24, 1946 for approved non-theatrical audiences.

DESTINY (Universal) 7 reels

Blind girl proves able to see good in hard-driven victim of circumstances about to take criminal path. Opens with exciting chase, then develops story by fine flash-backs leading to suspenseful climax. Excellent morale and discussion subject for churches, schools and clubs. (Gloria Jean, Alan Curtis, Frank Craven, Grace McDonald.) Available from June 22, 1946, for approved non-theatrical audiences.

HI, BEAUTIFUL (Universal) 6 reels

Light comedy of errors involving the home fires of a "model home" just a little too complete with all human accessories. Charming original twists. (Martha O'Driscoll, Noah Berry, Jr., Hattie McDaniel, Walter Catlett.) Available from June 8, 1946, for approved non-theatrical audiences.

MY GAL LOVES MUSIC (Universal) 6 reels

Stranded show-girl team improvises a mother-and-daughter act to win medicine show's local talent contest—a trip back to dear old Broadway. (Bob Crosby, Grace McDonald, Betty Kean, Alan Mowbray, Walter Catlett.) Available from June 15, 1946, for approved non-theatrical audiences.

MUTINY ON THE ELSINOR (7 reels)

Super-feature that follows Jack London's sea thriller. Paul Lukas (Academy "Oscar" winner) plays the part of an author who takes passage aboard a sailing ship in search of color for a novel, but finds more than he had bargained for. The ship is buffeted by storms, her captain killed, and life aboard made exciting by a mutiny. For days a struggle for control is waged, with victory by the writer, the captain's daughter, and the loyal members of the crew. This is a clean, exciting, vigorous adventure tale.

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Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, A. S. C. Director of Photography are assigned to the following productions currently shooting in the various Hollywood studios.

Columbia Studios

Burnett Guffey, "Gallant Journey," with Glenn Ford, Janet Blair, Henry Travers, Charles Ruggles.

Rudy Mate, "Down to Earth," (Technicolor), with Rita Hayworth, Larry Parks, Marc Platt, Edward Everett Horton, James Gleason.

Charles Lawton, jr., "Thrill of Brazil," with Evelyn Keyes, Keenan Wynn, Ann Miller, Allyn Joslyn, Tito Guizar, Veloz and Yolanda.

Henry Freulich, "It's Great to Be Young," with Leslie Brooks, Bob Stanton.

Hal Roach Studios

John W. Boyle, "Curley," (Cinecolor),

with Frances Rafferty, Larry Olsen, Eilene Janssen.

International Pictures

Lucien Ballard, "Bella Donna," with Merle Oberon, George Brent, Charles Korvin, Paul Lukas, Lenore Ulric.

Metro-Goldwyn-Mayer

Harold Rosson, "My Brother Who Talked to the Horses," with Peter Lawford, Beverly Tyler, Butch Jenkins.

Joseph Ruttenberg, "A Woman of My Own," with Greer Garson, Richard Hart, Bob Mitchum.

Robert Planck, "Uncle Andy Hardy," with Mickey Rooney, Bonita Granville, Dick Simmons, Dorothy Ford.

Charles Schoenbaum, "The Mighty McGurk," with Wallace Beery, Edward Arnold, Aline McMahon.

Sidney Wagner, "High Barbaree," with Van Johnson, June Allyson.

Ray June, "Beginning or the End," with Lionel Barrymore, Brian Donlevy, Robert Walker, Beverly Tyler.

Paul Vogel, "Lady in the Lake," with Robert Montgomery, Audrey Trotter, Leon Ames.

Harry Stradling, "Sea of Grass," with Katherine Hepburn, Spencer Tracy, Melvin Douglas.

Monogram

Harry Neumann, "Ghost Busters," with Leo Gorcey, Tanis Chandler.

Ira Morgan, "High School Hero," with Freddie Stewart, June Preisser, Ann Rooney.

Paramount

Charles Lang, "Where There's Life," with Bob Hope, Signe Hasso, William Bendix, George Coulouris.

Jack Greenhalgh, "I Cover Big Town," (Pine-Thomas) with Philip Reed, Hillary Brooke, Robert Lowery.

RKO

Edward Cronjager, "Honeymoon," with Shirley Temple, Franchot Tone.

Gregg Toland, "The Best Years of Our Lives," (Samuel Goldwyn Prod.) with Myrna Loy, Frederick March, Dana Andrews, Teresa Wright.

Lee Garmes, "The Secret Life of Walter Mitty," (Technicolor) (Samuel Goldwyn Prod.) with Danny Kaye, Vir-

ginia Mayo, Fay Bainter, Boris Korloff.

Victor Milner, "It's a Wonderful Life," (Liberty Films) with James Stewart, Dona Reed, Lionel Barrymore, Thomas Mitchel.

Harry Wild, "Nocturne," with George Raft, Lynn Bari.

Robert de Grasse, "Deadlier Than the Male," with Claire Trevor, Lawrence Tierney, Walter Slezak.

Milton Krasner, "Katie for Congress," with Loretta Young, Joseph Cotten, Ethel Barrymore.

Republic

Archie Stout, "Angel and the Outlaw," with John Wayne, Irene Rich, Gail Russell, Bruce Cabot, Harry Carey.

John Alton, "Snow Cinderella," (Walter Colmes Prod.) with Lynne Roberts, Charles Drake.

20th Century-Fox

Arthur Miller, "The Razor's Edge," with Tyrone Power, Gene Tierney, John Payne, Anne Baxter, Herbert Marshall, Anne Revere.

Joe MacDonald, "My Darling Clementine," with Henry Fonda, Linda Darnell, Victor Mature, Cathy Downs, Walter Brennan, Ward Bond.

Harry Jackson, "Carnival in Costa Rica," (Technicolor) with Dick Haymes, Celeste Holm, Cesar Romero, Vera-Ellen.

Glenn MacWilliams, "You're For Me," with Vivian Blaine, Harry James, Carmen Miranda, Perry Como, Phil Silvers.

Benjamin Kline, "Flight to Paradise," (Sol Wurtzel Prod.) with Paul Kelly, Osa Massen, Hillary Brooke.

United Artists

Karl Strauss, "The Short Happy Life of Francis Macomber," (Award Prods.) with Gregory Peck, Joan Bennett, Robert Preston, Reginald Denny.

Leo Tover, "Abie's Irish Rose," (Crosby Producers, Inc.) with Michael Chekhov, Joanne Dru, Vera Gordon, George E. Stone.

Russell Metty, "Bel Ami," (Loew-Lewin, Inc.) with George Sanders, Angela Lansbury, Ann Dvorak, Frances Dee, Marie Wilson.

Lucien Andriot, "Dishonored Lady," (Mars Films) with Hedy Lamarr, Dennis O'Keefe, John Loder, William Lundigan.

Robert Pittack, "Miss Television," (Comet-UA) with David Bruce, Cletus Caldwell.

Mack Stengler, "The Devil's Play-



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LINING UP FOR A CLOSEUP. George Folsey, A.S.C., Director of Photography on Metro-Goldwyn-Mayer production, "The Green Years", sets the lighting for a closeup of Hume Cronyn seated at table. Victor Saville directs the picture.

ground," (Hopalong Cassidy Prods.) with William Boyd, Andy Clyde, Rand Brooks, Ealine Riley.

Franz Planer, "The Chase," (Nero Prods.) with Robert Cummings, Michele Morgan.

Universal

Virgil Miller, "The Michigan Kid," (Cinecolor) with Jon Hall, Rita Johnson, Andy Devine.

Hal Mohr and W. Howard Greene, "Pirates of Monterey," (Technicolor) with Maria Montez, Rod Cameron, Philip Reed, Mikhail Rasumny.

Elwood Bredell, "The Killers," with Burt Lancaster, Ava Gardner.

Warner Brothers

Sol Polito, "Cloak and Dagger" (United States Pictures), with Gary Cooper, Lilli Palmer, Robert Alda.

Sid Hickox, "Cheyenne," with Dennis Morgan, Jane Wyman, Janis Paige.

Arthur Edson, "Stallion Road," with Ronald Regan, Zachary Scott, Alexis Smith.

Peverell Marley and William V. Skall, "Life With Father" (Technicolor), with Irene Dunne, William Powell, Elizabeth Taylor, ZaSu Pitts, Edmund Gwenn.

Ernest Haller, "Deception," with Bette Davis, Paul Henreid, Claude Rains.

Carl Guthrie, "Cry Wolf," with Barbara Stanwyck, Errol Flynn.

Hill Treasurer of Olesen Co.

Dan H. Hill has been appointed treasurer of the Otto K. Olesen Company, Hollywood distributors of 16 mm. sound projectors and lighting apparatus. He was formerly an executive of Lockheed Aircraft Corp.

Cooper Promoted by Florez, Inc.

Ray Cooper has been appointed photographic director of Florez, Inc. (formerly Visual Training Corp.) of Detroit. Cooper was associated with the photographic department of General Motors for several years.

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Telefilm Office Building Completed

In addition to housing the Telefilm executive offices, company's new building in Hollywood is being occupied by various producers utilizing the Telefilm production and laboratory facilities. Company's expansion plans provide for erection of a four story building to house the firm's studio and laboratories, with construction to start when materials become available.

Murtagh, McKenzie Promoted by Ansco

Thomas P. Murtagh has been named executive assistant to E. Allan Williford, vice president of General Aniline and Film Corp. in charge of the Ansco division. Murtagh has been with Ansco since 1942, and previously was associated with Eastman Kodak and Consolidated Edison in executive capacities. Garfield A. McKenzie draws assignment to new post of chief position analyst.

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Mathews With Princeton Film Center

Norman Mathews, who has had wide experience in production of training, documentary and educational films, affiliates with Princeton Film Center as director of production department.

Ansco Establishes 16mm Color Processing Plant in L. A.

New processing service for Ansco 16mm. color film has been established at the company's Los Angeles branch office. Service is designed entirely for west coast amateurs, and only amateur lengths of Ansco color film will be han-

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SOUND FILMS EXCHANGED \$1.00 per reel, plus postage. 400 ft. reel. Sam's Electric Shop, 35 Monroe St., Passaic, New Jersey.

dled. Similar processing facilities will be installed later this year in Chicago for midwest customers, company discloses.

Mitchell Resigns From Academy Post

Gordon S. Mitchell has resigned as manager of the Research Council of the Academy of Motion Picture Arts and Sciences, concluding nearly 15 years service with the Academy; the last 12 years in the managerial post. Mitchell returned several months ago after 3 1/2 years service in the Army Signal Corps as major in command of a motion picture unit in the south Pacific area.

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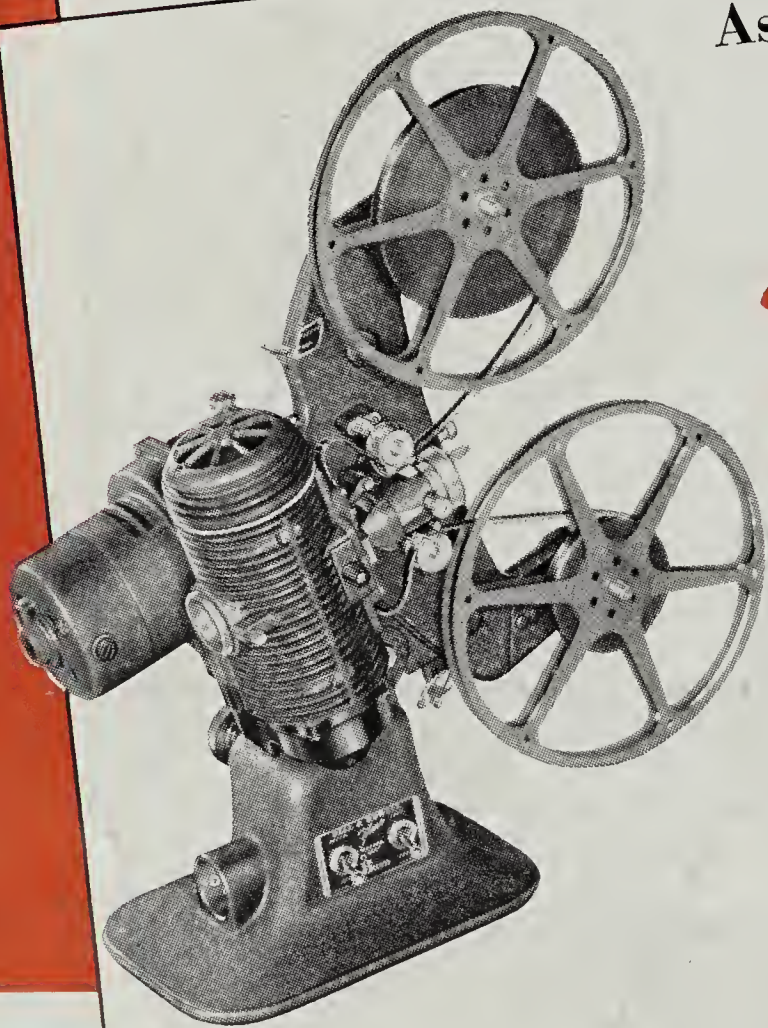
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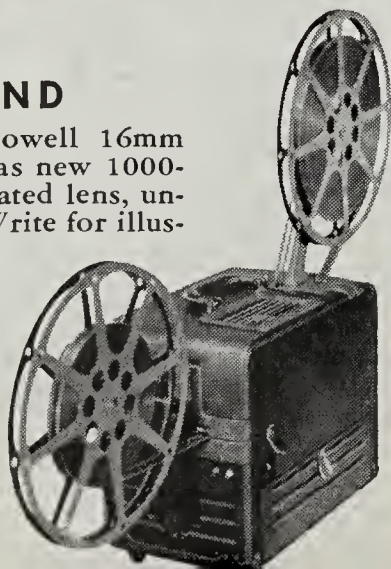
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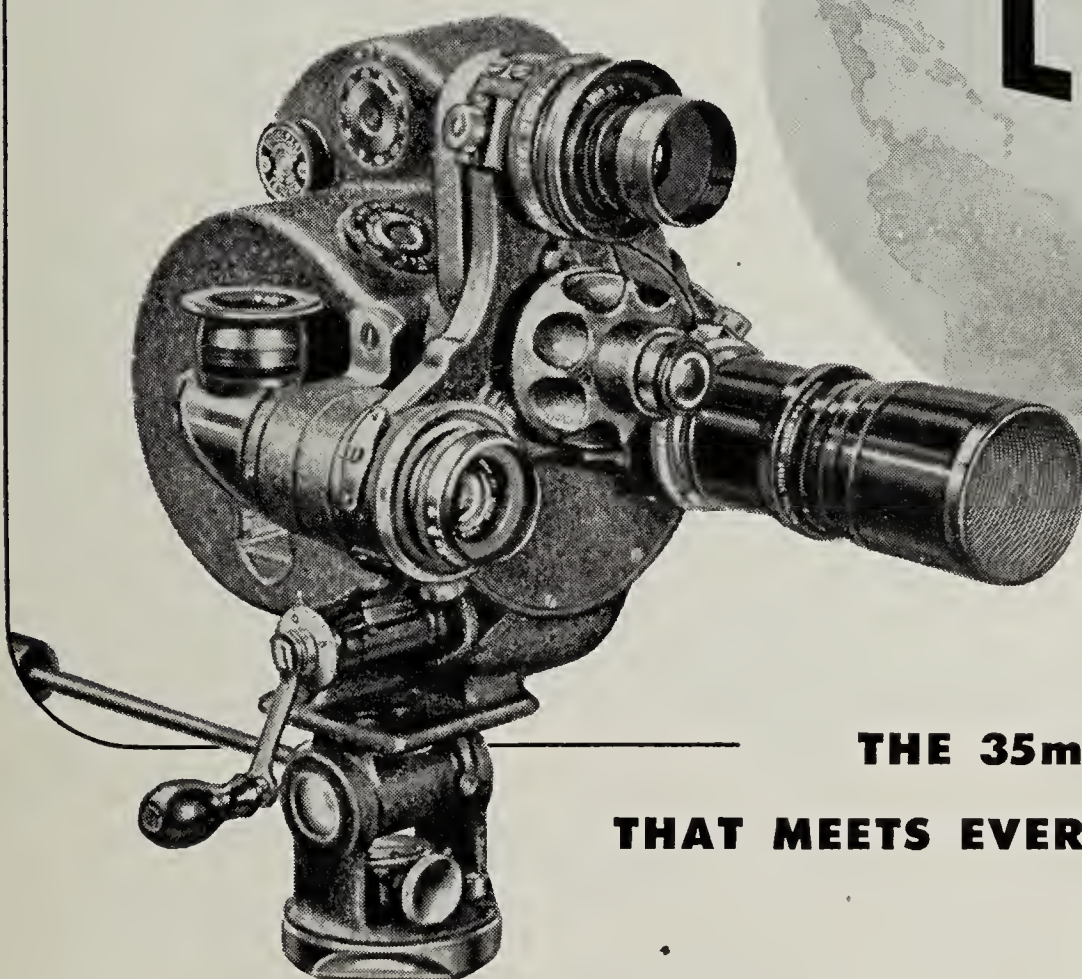
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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

JULY, 1946

NO. 7

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ON THE FRONT COVER Maureen O'Hara and Douglas Fairbanks, jr. rehearse a scene for RKO's Technicolor production, "Sinbad." Director of Photography George Barnes, A.S.C. (seated at right beside camera), closely observes the setup.



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Hollywood Acclaims A. S. C.

At 25th Anniversary Banquet

FOREMOST stars, producers, studio executives, directors, and other important personalities of Hollywood production circles gathered at the world-famed Cocoanut Grove of the Ambassador Hotel on the evening of June 17th to pay tribute to the American Society of Cinematographers on the occasion of its 25th anniversary celebration.

The banquet and ball was unanimously voted the finest affair of its kind ever presented in west coast film circles. It was exclusively an all-industry affair and not open to the outside public, with the limited attendance of 800 preventing overcrowding of guests in the large auditorium.

Eric Johnston, president of Motion Picture Association of America, as principal speaker of the evening, stressed the importance of motion pictures as the major instrument of creating peace and understanding among the nations of the world in these troublesome times. Darryl Zanuck, production head of Twentieth-Fox Studios, in his address, pointed out the important part played by motion picture photography in World War II and declared the important work of the camera must continue for the enlightenment of the peoples of the world for greater understanding one to another.

Cecil B. DeMille, producer-director of one of the early five reel features—back 33 years ago—sincerely lauded the cinematographers for continual striving for perfection in their art; but there never must be any complacency. In referring to the anticipated growth of international competition in film production, Mr. DeMille declared that such international competition will give the world better motion pictures—and better motion pictures will generate larger and more appreciative audiences.

Louis B. Mayer, executive head of Metro-Goldwyn-Mayer, spoke briefly to congratulate the organization and its members for past accomplishments, and express confidence in future advancements.

Following dinner, Leon Shamroy, First Vice President of A.S.C., stepped to the microphone to welcome the guests and introduce Jack Carson as master of ceremonies for the evening. Carson then introduced Messrs. DeMille, Zanuck, Mayer and Johnston in that order. Entertainment program then followed as detailed on other pages of this issue.

Address by Cecil B. DeMille

Mr. Carson, Mayor Bowron, Members of the American Society of Cinematographers, Ladies and Gentlemen:

In this company there's no chance for a retake, so I am going to read my notes.



ERIC JOHNSTON
President, Motion Picture Assn. of America

Young fellows like Louis Mayer, Eric Johnston and Darryl Zanuck can talk off the cuff—but when you get as old as I am, you remember as much—(about so many) that it's wiser to stick to the script—or you'll wear the poor listener out with garrulous recollections of things past.

Tonight, you gentlemen of the American Society of Cinematographers may well be proud of your accomplishments—but I hope you will never be satisfied with them. This is a time for congratulations—but there is never a time for resting on our laurels. Your job is not done. Success has its dangers and perhaps the greatest of these is complacency. I remember reading somewhere that early in the Nineteenth Century a motion was introduced in Congress to close the Patent Office—there was nothing new to be discovered or invented. Fortunately, Mr. Morse, Mr. Bell, Mr. Edison, Mr. Marconi, the Wright Brothers and a thousand others didn't feel that way.

Like other sciences and arts, motion pictures cannot stand still. America seized the lead in the science and art of the cinema during the first World War. We can hold that lead only by ingenuity and effort. Within the next quarter cen-

tury, international competition will be keener than it has been at any time since 1914. You have only to see some of the best of the English, Italian, Russian and French films to know that we have no monopoly on cinema brains and brilliance—though at present we have on technical things.

To change the old saying, the first 25 years weren't the hardest—the next 25 will be. But, as Mr. Churchill said, when England stood alone after Dunkirk, "personally, I find that rather bracing."

Competition will keep us on our toes. I have never been one of those who looked upon the foreign producer as a dreadful interloper. On the contrary, international competition will give the world better motion pictures—and better motion pictures will give us still larger and more appreciative audiences, which will help us all. And in the competitive race ahead, I have the fullest confidence that the American industry pulling together can more than hold its own.

When the A.S.C. was born, I was a veteran of eight years in motion pictures. You and I have seen the industry come of age. I always keep near me in my office an old Pathe camera with which Al Gandolfi shot "The Squaw Man"—the same one used by Alvin Wyckoff for "The Whispering Chorus." Bert Glennon shot many scenes for "The Ten Commandments" with it, and Pev Marley for "The King of Kings." Beside the modern camera, it's like a one horse shay beside a jet propelled plane. But it's a symbol of what has occurred in every department of production since you and I were young.

To recall some of the problems we had to deal with in those days—when Jesse Lasky and I were making them and Louis B. Mayer, thank goodness, was buying them—and since no motion picture gathering can proceed without a story about Sam Goldwyn—I'm going to tell one now.

David Griffith, God bless him, invented the closeup, as you know. He was the first man to make a camera think. In one scene I was taking a closeup of a man seated beside a lamp. We wanted to get a natural effect. The cameraman thought we could do it with spot lighting. So Wilfred Buckland raided the old Mason Opera House and borrowed one spot to light the side of the man's face nearest the lamp. Jesse Lasky and I were very proud of the result till we sent the prints to Sam Goldwyn in New York to sell.

Sam wired me, "Cecil, you have ruined us. You only show half the actor's face. The exhibitors will only pay half price for it."

I wired back, "If you and the exhibi-

tors don't know Rembrandt lighting when you see it, it's too bad for both of you." Then I got another telegram from Sam. It read: "Cecil, it is marvelous. For Rembrandt lighting, the exhibitors will pay double!"

Yes, there were laughs in those days—and some tears, too. And out of the laughter and tears and the hard work, a great art was arising—a newcomer, a baby among the arts—cinematography.

Did you ever hear a cameraman speak of his camera as his baby? The first cameras were very much like babies—they couldn't walk, they couldn't talk, they couldn't even see too well. But that baby had some devoted fathers.

You nursed it along. You taught it to see and eventually to talk. With the invention of the boom we had moving pictures that really moved. Things were going very well—when Crash! Came Sound!

The camera was imprisoned in a little glass booth. Actors and actresses rushed from the Broadway stage to replace the dimming stars of the silent screen. The

cinema became static—because the camera wouldn't move out of its glass prison, we were photographing stage plays.

I am sure everyone here has his own version of how the sound camera was invented, but I think Doug Shearer and Wesley Miller will remember how, one day, an irascible director literally dragged the camera out of its glass house and wrapped it in common bed blankets to deaden its noise, and about a week later our baby was put in its first cradle—"The Blimp"—and it began to walk again and to talk at the same time. Those were only a few of the great moments that you and I have shared.

Color photography has its own exciting story. The perfection of transparencies and miniatures has made possible what Mahomet failed to do—they brought the mountain into the studio, instead of the studio going to the mountain. These brilliant developments made possible shots that would otherwise have been out of the question.

The fine art that will forever be associated with the name of Walt Disney

merits a chapter all its own. In the vaults of the War Department are stored reels upon reels containing one of the most significant developments of our industry—the documentary film. And we have only scratched the surface of that new field which will revolutionize the teaching of our children—audio-visual education.

We have brought our baby up to this point by pulling together like a champion football team. Cameramen, directors, producers, stars, extras, technicians, carpenters, painters, grips, everybody.

It was the spirit of pulling together—the family spirit—was one of the things that made this industry great. It will stay great as long as we keep that family spirit. All the members of the family are grown up now—the danger is that, like many a modern family, we may begin to pull apart—that some of us may begin to think that we are bigger than our art or that our personal or group interests are more important than working together to serve the public and to



LOUIS B. MAYER



DARRYL F. ZANUCK



CECIL B. DE MILLE

serve the art that has given us all we have.

If any of us—individuals or groups—go down that selfish path, it will be the beginning of the end. We shall lose what we have built up. Destiny does strange things to those who do not appreciate the great gifts placed in their hands.

You gentlemen of the A.S.C. have a large share in the credit for blazing trails in the past 25 years. You have a large share in the responsibility for keeping to those trails in the next 25.

Among the many stars added to your crown during the past quarter century is one that I could hardly fail to mention tonight—your long suffering patience with me!

When Charlie Rosher invited me to speak here tonight he was kind enough to say some nice things about my cooperation with you. But the little I may have given you has been more than repaid by the much that you have given us.

In all the industry and to all the industry, there has been no more loyal or creative or valuable service than that rendered by the American Society of Cinematographers.

No one can tell in words alone the value to our industry—and so to America and to the world—of the accumulated years of service we honor tonight in celebrating this silver anniversary of the A.S.C.

When the motion picture public sees among the screen credits those three letters—A.S.C.—after the cameraman's name, they may but idly wonder what they stand for. But we know.

We know that those letters are like a patent of nobility in this great motion picture empire. They are like Distinguished Service Crosses awarded to the best soldiers in an army which has peacefully conquered the whole world.

You are the oldest organized group in the industry—and so you have the responsibility that goes with age. Wisdom should guide your group in the future as in the past. Your compass should be as it has been—cooperation—not blind, self-interest—but the good of all.

Those letters—A.S.C. should always be symbols of an enduring friendship—a friendship between the devoted masters of a great art and all the rest of us who have our parts in this great industry.

A friendship that stretches back for 25 years, that will go forward, I hope, unbroken for the years to come, as long as we live and after we are gone.

So, as an old kibitzer standing beside the camera while you men stand behind it, I say to you:

You have done a wonderful job during the first 25 years, now bend your backs and bow your brains so that at the end of the next quarter century I may look down from heaven or up from . . . where you have probably sent me many times, and say, "My, weren't we old fashioned!"

Address by Darryl F. Zanuck

Members of the American Society of Cinematographers, Ladies and Gentlemen:

When Leland Stanford tried that little experiment with a running horse a great

many years ago, when he lined up some 24 cameras in an effort to find out exactly how a horse could run, I am sure he did not realize that that original experiment born from the mind of a great horse breeder, a scientific mind, was really and actually the first step in the creation of the universal language; that it was one of the original developments that led to the production of motion pictures—the motion picture camera.

Today we have but one universal language in the world. It has taken two world wars for civilization to realize the potentialities of motion pictures. But at last I am certain that every government and every agency of every government recognizes the value, not only for entertainment but for enlightenment, of motion pictures. We see examples of it on every side.

In the late World War I am certain that we are all aware of the fact of the great part played by photography, not only the films that we were able to see, but photography in preparation for the most important missions. It has brought down to us a great responsibility, a responsibility that must not and cannot end now that we have this—shall I say—temporary peace. We are the guardians of a great device. We cannot curtail our efforts. The end of the war did not signal for us the end of our activities. We have this tremendous weapon of propaganda. It is vitally important that, as guardians of this weapon, we use it as offensively in the future for peace as we used it during the war for the purposes of warfare.

We all know that the power of the camera can make friends. We have seen the part that it has been able to play in the elimination of enemies, working together as a team whether we always like it or not. The central spot of our industry, or of our effort, must be and will continue to be the camera. It is a great responsibility; it is a responsibility we all share. While this is an industry of entertainment it must not continue to be solely an instrument of entertainment. There is enlightenment. While that is not our specific task, we cannot, we must not, ignore it if we are to remain the important force that we have become in the world affairs of the last few years.

Now I envy all of the cameramen. I envy you because you have come to the top in the most highly competitive profession in the entire world, certainly in the United States. Every American is potentially a cameraman, whether it be with a Brownie or with his little 16 millimeter. I don't know how you really became a professional cameraman because I know that there isn't a man, woman or child in the world who hasn't fancied himself a photographer. Yet you men have come to the top of your profession out of a field where the competition is probably greater than in any other profession. For that I envy you. After all, not a great many people have tried to produce a picture; it isn't quite



Inspecting Pathe motion picture camera of 30 years ago which was displayed at A.S.C. Silver Anniversary Ball. Left to right: LEON SHAMROY, First Vice-President of A.S.C.; JACK CARSON; LEONARD SMITH, President of A.S.C.; and LINDA DARNELL.

as difficult, I am sure, as becoming an expert cameraman.

You are more than photographers today; you are portrait painters using lights and shadows. You have become in our industry the one division or section that strives eternally for perfection. I know of no other branch of our industry where the competition and the desire for perfection is so keen. As a matter of fact I often wish when it gets near 6 o'clock and we have a big crowd on the set and we haven't got that last shot in the bag, that you weren't quite so perfect. I would like to get it before 6 o'clock. But in any event you are all perfectionists, and for that we all admire you.

In closing I should also pay a tribute to those members of your Society who are not present tonight—not all of them—and they are the combat cameramen of World War II. No braver, nor more courageous group served in any branch of the armed forces. You have only to look at the mortality rate to realize and recognize their contribution to victory. They have left behind them for future generations to see, the most amazing historical record imaginable. They have photographed in all its horror and detail not only battles, the victories and the defeats of World War II, but the events that led up to it. Think what this means. It means that future generations will have an opportunity to see these films when they are properly catalogued and they will owe most assuredly a great debt to the combat cameramen of World War II.

On your twenty-fifth anniversary I salute you in the name of Edison, Lumiere, Pathe, and all of those who blazed the trail. I am certain that the future generations when they have the time to look at the record that has been left behind in the archives of World War II—I am certain that civilization—can only benefit. Thank you.

Address by Louis B. Mayer

Members of the American Society of Cinematographers, Ladies and Gentlemen:

This is a memorable night. The twenty-fifth anniversary of the formation of your organization. First, I thank you for giving me the privilege of recording my enthusiasm in your past accomplishments and confidence in your future advancements.

I don't think it is necessary to make any long speeches tonight. But I did want to have the opportunity, in the moment that I will hold you, to tell you that our pictures lead the world. You have played a leading and important part in your fine contribution to our pictures. You have met every challenge. With each challenge, and the more difficult it was the greater was your determination to meet it. So you and your wonderful art have continued to progress.

The photography of motion pictures will always advance and when I greet you next at your golden jubilee we will recall this night and say, "We thought you were great then; you were infants in



Comfortably reclining in a divan carried by four huskies, ERROL FLYNN caricatured the Director of Photography of the future for rousing laughs.

the industry then; you are wonderful now." God bless you.

Address by Eric Johnston

Mr. Carron, and My Friends of the Motion Picture Industry:

It is grand to be out from under the mental fogs of Washington and be able to look at the stars in Southern California. I am even glad to be with the photographers tonight because they know that light travels faster than sound. But back in Washington they reverse the process—sound travels faster than light.

A sober anniversary is important to any man, but this bears a double significance because it marks the twenty-fifth anniversary of the progress and development of the art of cinematography. I am not going to discuss your glorious past; others have done that before me. I want to talk just a moment about your magnificent future.

You have a great opportunity to photograph a changing world and those photographs will go down to all posterity so that they can know what we tried to do during this age. We are in a great world of change and conflict and contrast. We have the contrast all the way from the tremendous progress of the scientific age and the atomic bomb, to the bleak destruction in which the world finds itself.

Tonight public opinion is focused on another continent—Paris, France—where the Ministers of four nations are sitting down together and attempting to work out the jigsaw puzzle and piece together again the remnants of a broken world.

What they do in Paris will have a profound effect upon your lives and upon posterity as well. You are photographing that tonight—you will keep it for posterity.

In this great age of change we find that we have won a great war, but there is no peace. We have a United Nations, but there is no world unity. We are clamoring for production and yet our machine is stalled in the mire of dissension. We haven't signed the peace treaty for World War II, and we are talking about World War III. It is inevitable that this should leave fear in the hearts of men; fear, perhaps, that we are unable to govern ourselves; fear, that perhaps liberties and these freedoms that we have struggled for throughout the centuries should be turned over to someone else.

Now that is where we in the motion picture industry come in. Because this fear stems, in my opinion, from the fact that we have learned how to make a living but we haven't learned how to live together. The motion picture industry can show us how to live together. It is a message that can go across boundaries. It has been said that the motion picture is the literature of the masses. It is more than that. It is something which all nations understand.

The motion picture, in my opinion, can sell anything. It can sell tolerance—it can sell the brotherhood of man. Yes, I believe that it can even sell peace.

Now there are many hard years ahead of us. But, in my opinion, we in Amer-

(Continued on Page 266)



GENE KELLY



GERALDINE SUTTER



RED SKELTON



DANNY KAYE

The internationally famous stars
of Screen and Radio who enter-
tained guests at the Silver Anni-
versary Celebration of the
American Society of
Cinematographers.



CHARLIE AND EDGAR BERGEN



JACK CARSON, DENNIS MORGAN, KAYE AND KELLY



CARMEN MIRANDA AND KAYE

Star Personalities In Great Show For A. S. C. Birthday Celebration



JACK CARSON

HOLLYWOOD will long talk about the outstanding entertainment staged for members of the film industry at the twenty-fifth anniversary celebration of the American Society of Cinematographers, held at the world-famous Cocoanut Grove of the Ambassador Hotel on the evening of June 17, 1946.

Paced by the brilliant Jack Carson as master of ceremonies, the show was launched at a fast clip, and continued at a hilarious tempo straight through to the finish.

Red Skelton, Geraldine Sutter, Danny Kaye, Carmen Miranda, Gene Kelly, Edgar Bergen, Dennis Morgan, Robert Alda and Linda Darnell—not forgetting the inimitable Carson—were the screen and radio stars of foremost rank who appeared on the program. Consensus was that the show proved to be the greatest and most entertaining presented in Hollywood since the inception of the American Society of Cinematographers more than a quarter century ago. Great credit for this accomplishment must go—not only to those appearing—but to producer-director David Butler who so ably assembled the program with James Kern as his associate.

Show opened with a series of lap blackouts on the evolution of the cameraman. Leon Errol stumbled in first as the cameraman of the early days staggering under his camera, tripod, still

camera and bags of equipment. Alan Hale, attired in plus fours, represented the second phase of the camera artist—when the latter rated an assistant who carried all the equipment with the exception of the camera and tripod. Ronald Reagan, in trench coat and beret, represented the motion picture cameraman of today—peering through a telescope and followed by three assistants who took over the carrying of camera and accessories. The cameraman of the future, portrayed by Errol Flynn, was represented as a master-mind lolling in a divan carried on the shoulders of four slaves. The blackout brought rounds of applause from the audience.

Carson then sang “We Went on Dancing,” with comedy lyrics; was interrupted by Robert Alda for instruction on proper song delivery; and the pair was then joined by Dennis Morgan and Linda Darnell for a turn.

Red Skelton Scores

Red Skelton appeared to comment, “I thought we’d never get around to the funny stuff,” and then held the stage for impressions of various types of speakers in front of the microphone; impressions of a playback on the sound stage; his inimitable caricatures of reactions of noted stars when shot as film bad men; and his famous dunking routine. Somewhere along the line he tossed off the

quip, “That Hercules plane Howard Hughes is building is not for the government. He intends it to be a billboard for ‘The Outlaw’.” Skelton literally knocked himself out while on the stage, and received a terrific ovation at the finish.

Geraldine Sutter, recently placed under term contract by Paramount, made a most auspicious debut in Hollywood by singing two song numbers. An operatic soprano of great accomplishment, Miss Sutter should become a solid performer in films for Paramount.

Danny Kaye Terrific

Danny Kaye was next to talk a comedy song, and follow it with a number with Mrs. Kaye accompanying. Kaye clicked solidly, and then brought Carmen Miranda to the platform, informing the audience that he intended to interpret her Brazilian songs. The idea went over with a bang, and then Miss Miranda continued to sing several of her popular numbers, with “Tica Tica” for the finale.

Gene Kelly was introduced next for a soft shoe dance routine, followed by an acrobatic solo dance number the like of which has never been seen by a Hollywood audience of celebrities.

Bergen and Charlie

Edgar Bergen, A.S.C., then marched on with the pestiferous Charlie McCarthy,

(Continued on Page 265)



Three views of the Coconut Grove of the Ambassador Hotel on evening of June 17th, when the Hollywood film industry saluted the A.S.C. at 25th Anniversary Celebration Ball.



The Stars Were There!



LUCIEN ANDRIOT, A.S.C., EDWARD CRONJAGER, A.S.C., ALAN HALE, MRS. CHARLES CLARKE, and CHARLES CLARKE, A.S.C.



JOHN ARNOLD, A.S.C., MRS. STANLEY CORTEZ (HELGA STORME), LEON SHAMROY, A.S.C., and STANLEY CORTEZ, A.S.C.



JOSEPH RUTTENBERG, A.S.C., left, with GREER GARSON and RICHARD NEY



GEORGE FOLSEY, A.S.C., and JUDY GARLAND



SHIRLEY TEMPLE, left, and JAMES STEWART



Producer-Director FRANK CAPRA, left, and JOSEPH WALKER, A.S.C.



Everybody Had A Good Time!



Seated: LEON SHAMROY, A.S.C., Producer-Director LEO McCAREY, Producer-Director DAVID BUTLER. Standing: ARTHUR EDESON, A.S.C., and CHARLES ROSHER, A.S.C.



EDWARD CRONJAGER, A.S.C., JOHN ARNOLD, A.S.C., WILLIAM GERMAN, vice-president and general manager of J. E. Brulatour, Inc., ARLENE DAHL, Warner starlet, and GEORGE GIBSON of Brulatour, Inc.



WILLIAM GRADY, M-G-M executive, KATHARINE HEPBURN, and KARL FREUND, A.S.C.



MRS. GREGORY PECK, GREGORY PECK, HOWARD STRICKLING, and CHARLES ROSHER, A.S.C.



ARTHUR EDESON, A.S.C., and Producer-Director DAVID BUTLER who was chairman of entertainment



MRS. JOHN ARNOLD, MR. and MRS. GENE KELLEY, JOHN ARNOLD, A.S.C.



Producer-Director LEO McCAREY with PHIL ROSEN, one of the organizers and First President of American Society of Cinematographers

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*which proves
that even we
can't talk enough
about it —*

J. E. BRULATOUR, Inc.

FORT LEE

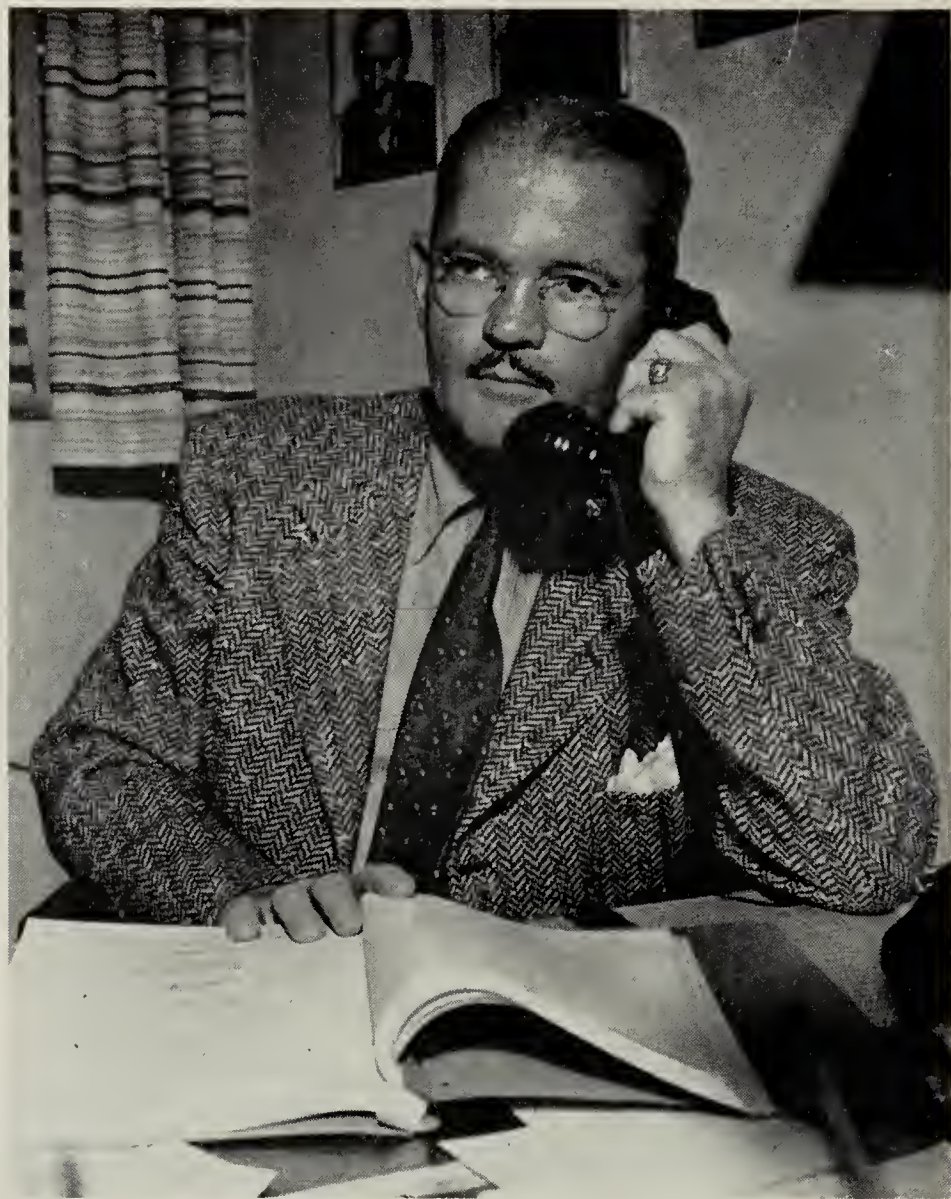
CHICAGO

HOLLYWOOD

ACES of the CAMERA

Daniel B. Clark, A. S. C.

by W. G. C. Bosco



IN this issue it is our privilege to write about a man whose efforts and contributions to the art and craft of cinematography have been many and varied—whose name has appeared frequently in these pages as they recorded his achievements and headed his highly instructive articles—and who has twice been honored with the presidency of the American Society of Cinematographers: Daniel B. Clark, A.S.C.

From the time he entered the motion picture business as an assistant cameraman soon after his discharge from the army after World War I, to his recent retirement from the highly responsible position of Executive Director of Photography for 20th Century-Fox, Dan Clark has piled up over 150 major productions to his credit, three awards from the Academy of Motion Picture Arts and Sciences for technical and scientific achievements, and a solid reputation among a host of friends and admirers as a hunter, fisherman and regular fellow.

His initiation into the camera fraternity resulted in a considerable financial sacrifice when he gave up a job with the telephone company at \$48.00 per week (every week) for the \$18.00 offered for his services at Fox Studios. But when he found himself assigned to the Tom Mix company he decided that he had made a wise choice after all, and that money wasn't everything.

The first day's work took the company out to Newhall, a long-time favorite location for Western pictures in the foothills

a few miles from Hollywood, where the script called for Mix to ride and rope, leap from a speeding train, and engage generally in the activities which the public had come to expect from its favorite Western star. And all accomplished, of course, at the expense of considerable energy and effort on the part of the camera crew.

The rugged physique Dan had built up as a boxer stood him in good stead in those days. And his aptitude for photography and photo-chemistry gave him an edge. In three years he had won his spurs.

Tom Mix had millions of fans, but no one admired the cowboy star more than Dan, who found in the actor all the best qualities of a man. The two became fast friends and remained so until Tom's untimely death.

As production cameraman for Mix, Dan pioneered the use of the National Parks and Monuments as background for action pictures. The judicious use of these pictorial backgrounds helped to give Dan's photography a quality of artistry that won for him early recognition as a cameraman of distinction. Since then he has traveled all over the world, even into seldom visited sections of the Arctic and the Tropics, in pursuit of pictorial settings. He also has the distinction of having wielded a camera from every type of moving vehicle, including a plane at 25,000 feet and a submarine below the surface of the ocean.

Dan seems to like pioneering. During his years with Fox he developed the use

of incandescent light. Again, he was instrumental in introducing the lightmeter into studio practice and standardizing its use in his home studio; from which the practice spread rapidly throughout the industry. He was also intimately associated with the experiments on 70 mm. 'Grandeur' film, and, if rumor can be credited, effectively lent his knowledge and experience to the current work under way at Fox on the hush-hush 50 mm. film.

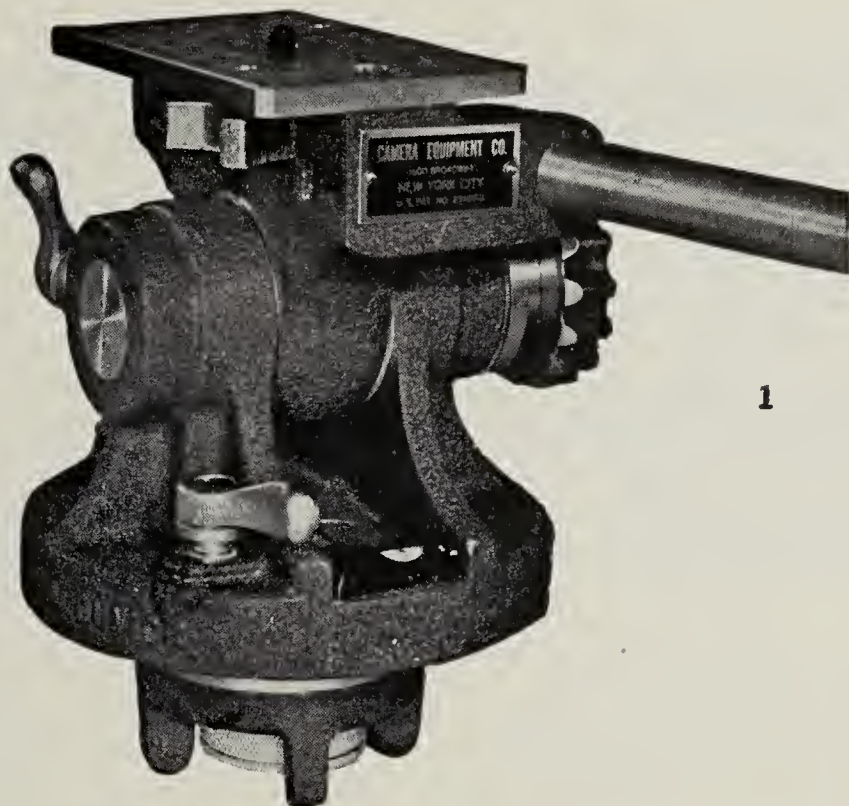
With a passion for phototechnical consistency, and a practical understanding and appreciation for the value of standardization of such factors as light and lens from the cameraman's viewpoint, Dan as Executive Supervisor of Photography, worked out a method of correctly calibrating lenses according to their light transmission factors; thus standardizing the f. value of all lenses regardless of their focal length.

Incidentally, it will be of interest to cameramen to note here that among the more than three hundred lenses tested and calibrated at Fox Studios under Dan's system and supervision some were found to vary as much as 200% from a given f. stop.

The value to the industry of Dan's efforts on this matter of lens calibration was hailed far and wide, and won for him one of the coveted awards from the Research Council of the Academy as well as filling pages in the phototechnical journals around the world.

As head of the Photographic Depart-

(Continued on Page 263)



1



2



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THROUGH the EDITOR'S FINDER

IT WAS the greatest event of its kind ever presented by a group or organization of the Hollywood film colony. That was the unanimous consensus of the hundreds of stars, producers, executives, directors and others identified with the production of motion pictures, on the banquet and ball commemorating the twenty-fifth anniversary of the American Society of Cinematographers.

First formal affair of the Hollywood industry since the conclusion of the war, it had dignity, brief—but pointed—speeches by outstanding leaders of the business, and a whirlwind program of entertainment by film and radio stars, the like of which had seldom been assembled on an individual occasion.

In addition to extending most sincere thanks to the guest speakers and artists who combined to make the affair such a smashing success, the American Society of Cinematographers is extremely grateful to producer-director David Butler and his associate, James Kern, in assembling and pacing such a fine show. Not to be overlooked in passing credits around was the valiant work of President Leonard Smith, First Vice-President Leon Shamroy, Second Vice-President Charles Rosher, Arthur Edeson, A.S.C., and Executive Vice-President Fred W. Jackman in handling the most strenuous preparations for the event—which is an important milestone in the glorious history of the A.S.C.

As Others Viewed It

Rather than give our own and most enthusiastic impressions of the silver an-

niversary party of the organization, let's reprint some comments from newspaper syndicate writers who were present.

Dorothy Manners, in her column for International News Service, wrote: Afterthoughts on the American Society of Cinematographers' twenty-fifth anniversary ball at the Cocoanut Grove: the really fine speech and impression made by Eric Johnston, his most impressive appearance yet before the flock. . . . Carmen Miranda's white beaded gown cut down to here and up to there, topped with white aigrettes in her hair. . . . Red Skelton wrecking his dinner jacket in a hilarious routine, sliding the entire length of the dance floor on his shoulder. . . . Jack Carson's ingratiating M. C. routine. He's just about tops. . . . Gene Kelly's heart tapping soft shoe routine. . . . Candid cameramen snapping every mouthful of food Gregory Peck ate. . . . The delightful hospitality of the Charlie Roshers. . . . The wonderful clowning of Danny Kaye, Carson, Dennis Morgan and Edgar Bergen. . . . Maureen O'Hara's ultra severe hair-do that only a dream boat could wear, and then not often. Greer Garson and Richard Ney vying with Jane Wyman and Ronnie Reagan for 'best dancing couple' honors. . . . The caricature on the evolution of the cameraman put on by Leon Errol, Ronnie Reagan and Errol Flynn. All in all, one of the best of the industry parties."

Hedda Hopper's column observed: "About every top name in pictures showed at the Cinematographers twenty-fifth anniversary banquet to pay tribute to the boys who take the bags from under the eyes and lift those fallen chins. Louis B. Mayer made a stirring speech. Gene Kelly, Danny Kaye, Carmen Miranda and Red Skelton put on a great show."

Edith Gwynn, in the Hollywood Reporter, commented several days later: "People are still talking about the really great show put on at the American Society of Cinematographers' dinner at the Grove. No doubt about it, it raised the prestige of the photogs to a place where they belong. The lengthy list of star performers was great—Jack Carson, Danny Kaye, Carmen Miranda being particularly sensational."

George Phair, whose column is a bright spot in Daily Variety, said: "Once a year at the Oscar Awards and the second time, at their banquet, they are the American Society of Cinematographers. The rest of the year they are only cameramen but they do more for the film industry than a flock of execs."

Florabel Muir, in her widely syndicated column, wrote: "The best friends and severest critics of the movie stars—the men behind the cameras—had their

night to howl Monday. On every other day of the year they're squinting critically through their finders looking for flaws and faults in lighting, make-up, decoration. They do that because perfection is their objective. Monday night the industry turned out pretty much en masse to level its finders on the A.S.C. And the A.S.C. gave everybody a great show. Incidentally, if the salaries and incomes represented at the Cocoanut Grove were stacked up beside the Fort Knox gold reserve, you could hardly tell the difference."

Jimmy Starr columned: "The show which had Jack Carson for an M. C. was terrific. . . . Red Skelton wowed 'em, Danny Kaye floored 'em, Carmen Miranda knocked 'em silly, and Eddie Bergen had 'em daffy. . . . Others who contributed to the general entertainment were Gene Kelly, Linda Darnell and Dennis Morgan. . . . David Butler staged the show and deserves a nice pat on the back for it."

DESPITE the discouraging handicaps encountered by the various manufacturers of motion picture cameras, projectors, and accessories in securing necessary metals and raw materials for peacetime volume production during the past eight months, it is most interesting to note the determined optimism of executives of several manufacturers in laying long-range plans for stepped-up production which will gradually overcome the present shortages, and meet requirements on a normal basis in the future.

Bell & Howell purchased the Lincolnwood plant in Chicago—constructed originally at a cost of \$2,225,000—from Reconstruction Finance Corp., and then proceeded to build another structure of 24,000 square feet nearby. Mitchell Camera Co., which has been making precision 35 mm. motion picture cameras for many years, gave positive notice of its expansion plans for fabrication of 16 mm. professional model cameras by acquiring a four story building adjacent to its base plant to take care of greatly-increased production.

Also of material future benefit to potential purchasers of 16 mm. sound projectors and equipment is the announcement that Ampro Corporation, a subsidiary of General Precision Equipment Corporation, will enjoy the benefits of the work of the leading physicists and engineers on the staff of General Precision's new research and development laboratory. This direct research connection for Ampro will provide access to outstanding research and engineering facilities heretofore unavailable to the company.

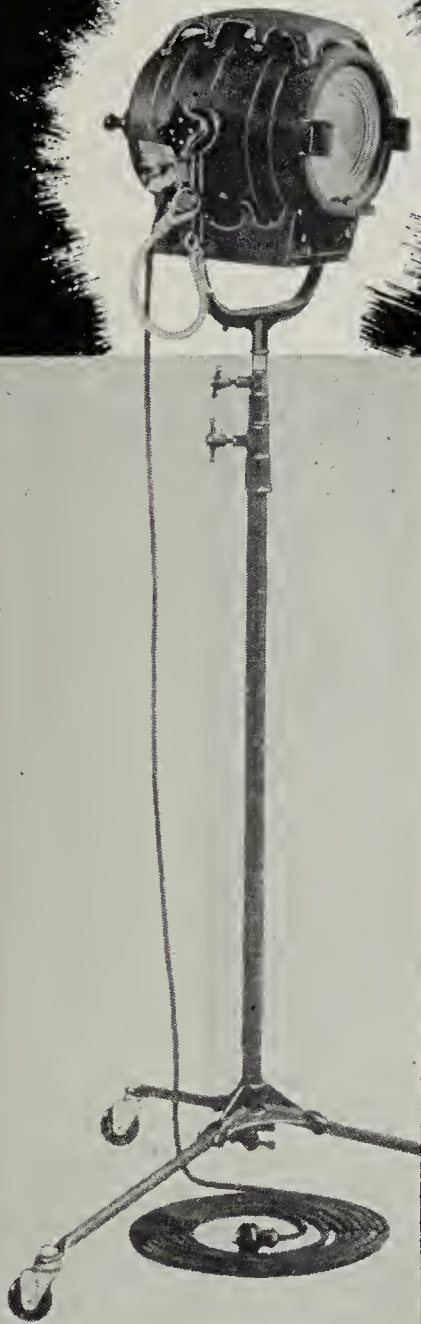
THEODOR SPARKUHL, A.S.C.

Theodor Sparkuhl, A.S.C., died after but a few days illness on June 13th at Santa Fe hospital. For more than three decades, he was a prominent cinematographer—first in Europe, and Director of Photography on Hollywood productions since 1931. Born in Hanover, Germany, and graduate of several universities of the latter country, Sparkuhl started in the film industry on the projector sales staff for Leon Gaumont in 1911, but a year later was behind the camera for Gaumont News.

He became associated with Ernst Lubitsch at UFA Studios, Berlin, until 1923, when the director departed for Hollywood. Continuing on with UFA until 1928, he had short stretches with BIP in London and a studio in Paris before arriving in Hollywood in late 1931. Signed to contract as a Director of Photography by Paramount shortly after, he remained with that studio for 13 years. During the period, he was responsible for photography on numerous productions for that company. Recent achievements included Photographic Direction on Cagney's "Blood on the Sun," and "Bachelor's Daughters."

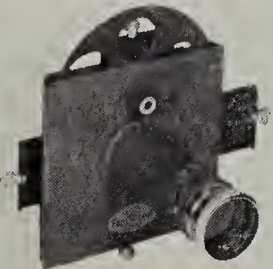
Funeral services were held June 15th at the Church of the Reformation at Forest Lawn. He is survived by his widow and five children.

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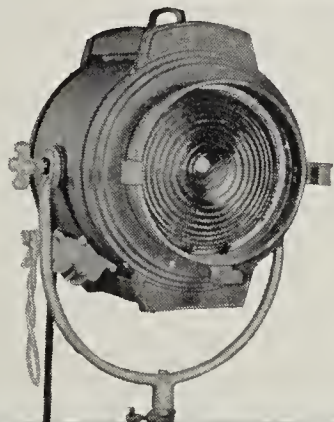


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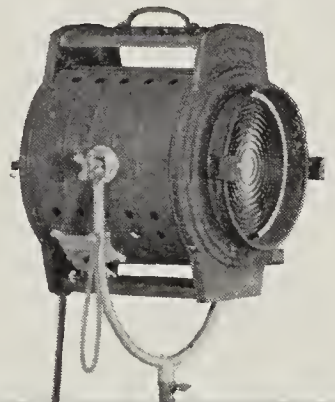


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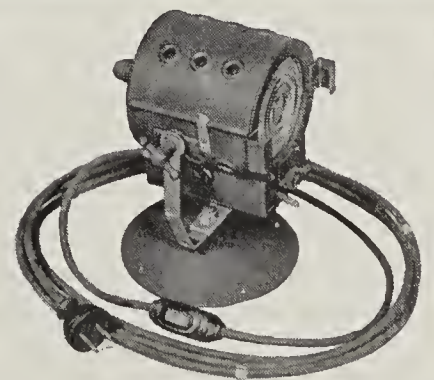
• *Write* for literature describing the Baby Keg-Lite, The Dinky-Inkie, The Junior Spot (1000-2000 Watts), the Senior Spot (5000 Watts), the Single and Double Broads, and their accessories as shown in the accompanying illustrations. Bardwell & McAlister lighting equipment has a complete line of Snoots, Diffusers, Barn Doors and other accessories for controlling light at all angles and under all conditions. Address Dept. 12-76



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The Cinema Workshop

1. The Cinematic Idea

By CHARLES LORING

(Editor's Note: The following article is the first of a series of features devoted to the production requirements of the advanced amateur and semi-professional film-maker. Cinema Workshop will present each month a different phase of motion picture production, from the original idea to the final presentation of the film on the screen. Wherever possible, professional studio techniques will be presented and analyzed so that they may be available for practical use in production.)

THE motion picture is many things to many people. To the financier it is a huge financial enterprise—America's fourth largest industry—an empire of studios, theatres, and the merry sound of money tinkling at the box-office. To the average theatregoer it is an evening's relaxation, his best all-round form of entertainment, an escape from hum-drum reality into a world of celluloid glamour. To the modern industrialist and educator it is a potent instrument of instruction. To the hobbyist it is a pleasant, creative way to make idle hours happy and productive.

To each one the motion picture means something different—and yet, for everyone it has certain things in common. Firstly, the motion picture is not just one process. Rather, it is a combination of several arts and technical processes blended together to produce an active result on a strip of film edged in sprocket holes. Writing, direction, photography, acting, cutting, sound recording, and a series of allied processes all have a share in the final picture as it appears on the screen—and it is up to the film-maker to make each one of these tools work for *him* instead of allowing himself to become swamped by them.

The Idea As a Basis

Perhaps the foremost feature that all motion pictures have in common is the fact that each one is based upon an *idea*. No matter whether it be a Hollywood photoplay, a documentary film, or a home movie record of the family—every suc-

cessful motion picture has as its basis a definite cinematic idea.

A film that is made without a central idea is nothing but a hodge podge of disconnected shots that fit clumsily together, have no coherent meaning, and succeed only in boring an audience when projected on the screen. How often has the reader been called in to view the home movie efforts of a well-meaning neighbor, only to be subjected to a mass of disconnected and undramatic scenes? How often has a training or commercial film fallen flat because it had no important idea to put across? How often has a lavish Hollywood photoplay flopped at the box-office—in spite of expensive stars, settings, and technical talent—merely because the idea behind the film was not strong enough to hold audience interest.

"The idea is the thing—" (to paraphrase Shakespeare). If it is lacking in punch all the good acting, direction and photography in the world will not be enough to justify the time the audience will waste in viewing the resultant film.

The idea should be looked upon as a sort of bedrock foundation upon which is built the product of the various arts and crafts that go into motion picture-making. It should be the first thing the film-maker considers—be he Hollywood producer or home movie fan—before he assembles his various elements for the shooting of the film.

Sources of the Idea

The Hollywood producer is necessarily restricted in his choice of an idea for a motion picture. He makes films for the great mass of the American public, entertainment films of a fictional nature. Therefore, he is limited to ideas that contain elements of (a) *general audience appeal*, (b) *entertainment value*, and (c) *box-office draw*. He cannot hope to please all of the people all of the time, but he aims to please the largest segment of his potential audience most of the time. Since American filmgoers, by and large, are attracted to the theatre pri-

marily by star names, the producer must make sure that any idea he is considering is adaptable to the talents of the particular stars he has available. Not only that, unless the film follows certain tried and proven ideas ("boy meets girl," for instance) it will usually not pay off at the box-office. And the great god Box-Office is what makes the Hollywood wheels go around.

The Hollywood producer, therefore, is limited in his choice of ideas. He usually bases a film on a story, novel or play—an idea that has already been accepted in some other form by the public. Occasionally he will consider a certain background or story thread and assign a writer to develop an original screenplay from that idea; but in any case, he must stay within the bounds of established Hollywood precedent.

The advanced amateur or semi-professional, on the other hand, is not limited in this way. Rather than being faced with the task of pleasing a hundred million filmgoers, he can make pictures for smaller, more select audiences. Depending upon the specific audience for which he slants his film, the sky is the limit as far as basic idea is concerned.

Naturally, he must first analyze his audience. He would not make the same kind of film for the Parent-Teacher Club as he would for a society of chemists or a college football team. The basic idea varies with the character and visual requirements of the potential audience.

But aside from this consideration, he is free to let his imagination soar in the choice of idea and its execution. The would-be film producer finds about him a whole world of ready-made cinematic ideas and suggestions. The life of a farm horse, the manufacture of steel or cloth, the way people live in Mexico or in other parts of his own city—all these and many more are the ideas that everyday life offers to the film-maker.

The basic idea need not necessarily be as tangible as these suggestions; rather, it may be an emotion or character trait. Fear, Anger, Jealousy, Courage, Faith—all these can form the *idea basis* of an absorbing film. Similarly, a single physical phase of nature can provide the idea—Fog, Rain, Sunshine, etc.

Often an idea can grow out of a particular locale such as Yosemite, Sun Valley, or the Grand Canyon. When this is the case, a suitable story theme should be injected so that the locale becomes a motivating factor of the action rather than a mere static background. Characters build human interest, and often a particular character provides an engaging idea upon which to base a film. The corner druggist, a circus clown, or a visiting celebrity are only a few of the many colorful personalities about whom an interesting film could be woven.

The inventions of man, the deeds of average people, the functions of certain branches of the government, along with thousands of other ideas are all available for interpretation on the screen. Look about you for ideas; they are

everywhere, just waiting to be discovered.

All too often the non-professional feels that he doesn't dare turn a camera unless he has an earth-shaking idea in mind. He is convinced that nothing short of a theme like "Gone With the Wind," is worthy of his cinematic efforts. This is far from the truth; in fact he stands a better chance of achieving a successful film if he selects an idea that is not too ambitious. A *small* idea can become the basis for a *big* picture. I do not mean an *unimportant* idea, but rather one that may be compact in scope. "A Day in the Life of a Dog," to name an elementary example, could become a very entertaining film if it were done with style and imagination. On the other hand, an amateur attempt to portray the Civil War on the screen could hardly fail to be clumsy and inept. Draw upon sources around you for ideas before venturing into fields that are unfamiliar.

Requirements of the Idea

When an idea is being considered as the basis for a film, there are certain requirements that it should meet before being definitely selected:

1. *The idea should be worthwhile.* The making of any motion picture is a large operation, no matter on how modest a scale it is undertaken. It represents a sizable outlay of time, effort, and expense, all of which would not be justified if the idea were not worthy of such attention. The only way to judge an idea's worth is to analyze the results to be achieved in filming it.

2. *The idea should either entertain or inform or, preferably, do both.* The film-maker must know his prospective audience and then ask himself the question: "Will this film entertain or inform that audience?" If he can answer in the affirmative, he is justified in going ahead to develop his idea into a finished picture.

3. *The idea should be kinetic.* The motion picture, as the very term implies, is a medium that depends upon *action*. In spite of all the tricks that have been used by film-makers to force movement into a static idea, the fact remains that a satisfactory film cannot be made unless the idea itself possesses the elements of action.

4. *The idea must be pictorial.* That is to say, it should be capable of being staged in interesting locales and settings. The word: *interesting* does not imply lavish sets and beautiful landscapes. Rows of wash in a tenement court may be *interesting*. Smoke from the chimneys of a hobo village may be *interesting*. The dirt-smeared faces of sweating laborers may contain elements of great *pictorial interest*. If these elements are present in the idea, the film has a head start toward being a success.

5. *The idea must be cinematic.* Many fine novels and plays have been written that would not make good motion pictures because they are not translatable into the language of cameras and film. Similarly, the non-professional film producer will hit upon many ideas that sound fine until he stops to think of them

in cinematic terms. The motion picture, in spite of its almost boundless scope, does have certain limitations, and there are some abstract ideas that are difficult to portray on the screen. The film-maker should shy away from these ideas and confine his efforts to themes that by their very nature can best be portrayed through the medium of the screen.

6. *The idea should be practical.* Here, again, the average film-maker tends to approach ideas that are too ambitious for the production set-up with which he has to work. If he lives in an inland district he invariably wants to shoot a sea story. If he is working on a close budget he usually thinks it would be nice to have a "cast of thousands." Actually, it is very possible to stay within the limitations of equipment, locale, and budget—and still turn out a fine motion picture. Picture-making is an exacting business at best; the film producer should not make it more difficult by straining limited resources to film an idea that is obviously out of reach of his production set-up.

Developing the Idea

Before he starts to shoot his story, even before he writes his script, the film producer should have the idea fully developed and analyzed in his own mind. He should give that idea a good deal of thought, allowing his imagination to play with the various facets of the subject, letting the idea build up in his mind until he can see a clear mental picture of how it will appear on the screen. He should take notes, jotting down the details as they occur to him, later cataloguing and arranging these notes to help him in production planning.

As we have said earlier, the *idea* is the foundation of the film, and the intelligent producer builds his whole production around it. Each technical process, every line of dramatic approach is keyed to that basic idea, and is discarded if it does not materially add to its interpretation. Beware of effects that lead the film on tangents away from the main thesis. Unity is the keynote of smooth continuity on the screen.

As the producer works mentally with the idea, he will find that it takes on shape and depth and character until finally it evolves itself into a theme. A theme is an idea that has broadened in scope to the point *where it becomes the underlying motivation of every step and process in the making of the film.* For instance, let us say that a producer wants to make a film based on the idea of "Dust." The idea in itself is rather abstract and might be interpreted in a number of different ways. But as he thinks deeper into the subject, applying his imagination to its development, he is very much impressed with the role that *dust* plays in the lives of mid-western farmers—those men of the soil living in the so-called "Dust-bowl" area where fierce dust storms destroy crops and life and fight the farmer for his very existence. After it has been broadened out in this manner the word "Dust" is no longer an abstract idea; it has become a vital motion picture theme, and

might be called: "Dust: Enemy of the Farmer."

Actually, the *theme* as it develops from the *idea* becomes the factor that will determine what treatment the whole production will receive. It will dominate the succeeding steps of writing, directing, filming and cutting. Its message will be indicated in every bit of action and narration that goes to make up the film. If the film-maker keeps his central idea constantly in mind throughout the various steps of production, his film will have a directness and unity of approach that will make for effective cinema.

We have discussed the element that is the nucleus of our film—the *cinematic idea*. We understand the important part it plays as the foundation of the film. We are now ready to go on to the next step in transforming that idea into a motion picture: the preparation of the script.

Next issue: The Script.

Canadian Provinces Install Central Film Libraries

All of the eastern provinces of Canada have installed central film libraries and appointed provincial directors of audio-visual aids. This information is disclosed by Charles R. Crakes, educational consultant of the DeVry Corporation, who recently returned from tour of eastern Canada, who further stated that there was an intense interest by educational leaders of the Dominion in providing audi-visual tools of learning for the rural areas and small villages of that country.

Photo Agencies Incorporate

Photo Agencies of Southern Africa, headquartered in Johannesburg, has been incorporated, with Eric Horvitch functioning as managing director. Firm, which has operated for number of years under management of Horvitch, represents leading professional and amateur motion picture equipment manufacturers in Union of South Africa, northern and southern Rhodesia, British Protectorates, Portuguese East Africa and adjoining territories.

Scientific Books Wanted

Our cooperation is asked to present to professional and amateur cinematographers of the United States the request of American Book Center for War Devastated Libraries, Library of Congress, Washington, for donations of scientific books which will be useful in research and necessary in the physical, economic, social, and industrial rehabilitation and reconstruction of Europe and the Far East. Perhaps some of our numerous movie enthusiasts may have discarded volumes of technical phases of photography and cinematography which would serve most useful purposes in zones where libraries were destroyed. Ship contributions prepaid to ABC, care of Library of Congress. Collect shipments cannot be accepted.

THERE are so many things to say about filming today in Central and South America that it is difficult to know where to start. Perhaps one of the most important things to know is how much film you should figure on taking with you; should you take it all along, or take part of it and send the rest of it ahead; or, should you try to pick it up at photographic stores as you go along.

My advice is to take all the film you think you will require along with you, for you cannot depend on getting it in any of the Central or South American countries today. Don't send a supply ahead of you, for believe it or not, film sent by Air Express today, takes not the day or two that the Air Express advertisements would lead you to believe it will, but anything from a week to a month. I know, for I had some of my supply of film—fortunately not a lot of it—sent ahead and only one single shipment caught up with me. In addition to this uncertainty of receiving it, you will have the certainty of paying duty on it when you try to get it out of the customs.

How Much Film Should You Take?

The next question is how much film you should take. That was a very difficult question to answer before I left, but an easy one now since I have seen the various countries. You will undoubtedly not want to use as much film as I did, but the best way to tell you what countries are the most interesting and those in which you will shoot the most film, is to tell you how much I shot in each country. You can reduce the total to a percentage basis and figure out from this what you should take. I shot 14,000 feet of 16mm. kodachrome film—and here is the way I used it: Mexico 1500 feet; Guatemala, 1700 feet (and I could have shot another 500 feet); El Salvador 500 feet; Honduras 300 feet; Costa Rica 1200 feet; Panama 600 feet; Colombia 1000 feet; Ecuador 1000 feet; Peru 900 feet (provided you go to Cusco. If you don't go to Cusco, 500 feet is enough). Chile 1800 feet; Argentina 500 feet; (they don't like cameras in Argentina and you will find it very difficult to shoot much there). Uruguay 1000 feet; Brazil 1200 feet; Barbados 700 feet.

No Trouble With Customs Officials

You will not have the slightest trouble with Customs Officials in any of the countries of Central or South America except Argentina, where you will have plenty. You will find them all very courteous and cooperative—just don't try to hide anything and you will be O.K. At least, that was my experience throughout the whole trip. It is important, however, if you are using a camera of a foreign make, to be sure to register it with the U.S. Customs before you leave, for if you don't, you may have to pay duty on it when you return. If your camera is made in the U.S.A. you don't need to worry about registering.

Be Sure All Film Is Tropical Packed

Be sure that all the film you take is tropical packed, especially if you are going to use it in Panama or Brazil. You

Filming Today Through Central and South America

By E. H. SCOTT

Author of The Scott Tour Guide to Central and South America

will find that all Kodachrome film is tropical packed, but I had some Ansco 16mm. with me and discovered too late it was not tropical packed and the results were not too satisfactory. Panama and Brazil are the two countries where you must be particularly careful with your film for they are fairly hot and humid. Get your film posted back (or if you have very much send by Air Express) just as quickly as possible after you finish shooting, for it is important to get color film processed as quickly as possible after exposure.

Don't Send Large Quantities Of Film Back In One Shipment

You might be surprised to know that if you expose film made in the U. S. A. in a foreign country and it is going to be used for "commercial purposes" that before the U. S. Customs will release it to be developed, they will make you pay duty on every foot of it. You will find that if you send ten or twelve rolls back in one package, the U. S. Customs will hold it up and make you prove it is not going to be used for commercial purposes before they will release it. So the thing to do is to send back your film one or two rolls at a time, then you will have no trouble.

Use Your Exposure-Meter And Tripod

If you want good pictures, especially in color, you had better use a light-meter on every shot. I have taken over 50,000 feet of film and believe it or not, I still check every shot with not one light-meter, but two. One a Weston Universal and the other a G. E. They are both calibrated and the readings check perfectly on a test light. If I find that the two readings don't jibe, I re-check. You probably don't want to go to this trouble, but I like to have my color right and that's the way I get it. Don't shoot anything below F11, no matter what the meter says, or you will surely be underexposed. When in doubt, over-expose, rather than under expose. Finally, use your tripod on every shot. It's a little more trouble to set up, but it is worth it in the results you get. You will find if you use a tripod, it will not only give you a rock steady picture that won't run all over the screen when you show it, but will help you in composition as well.

How To Get Good Pictures Of Natives

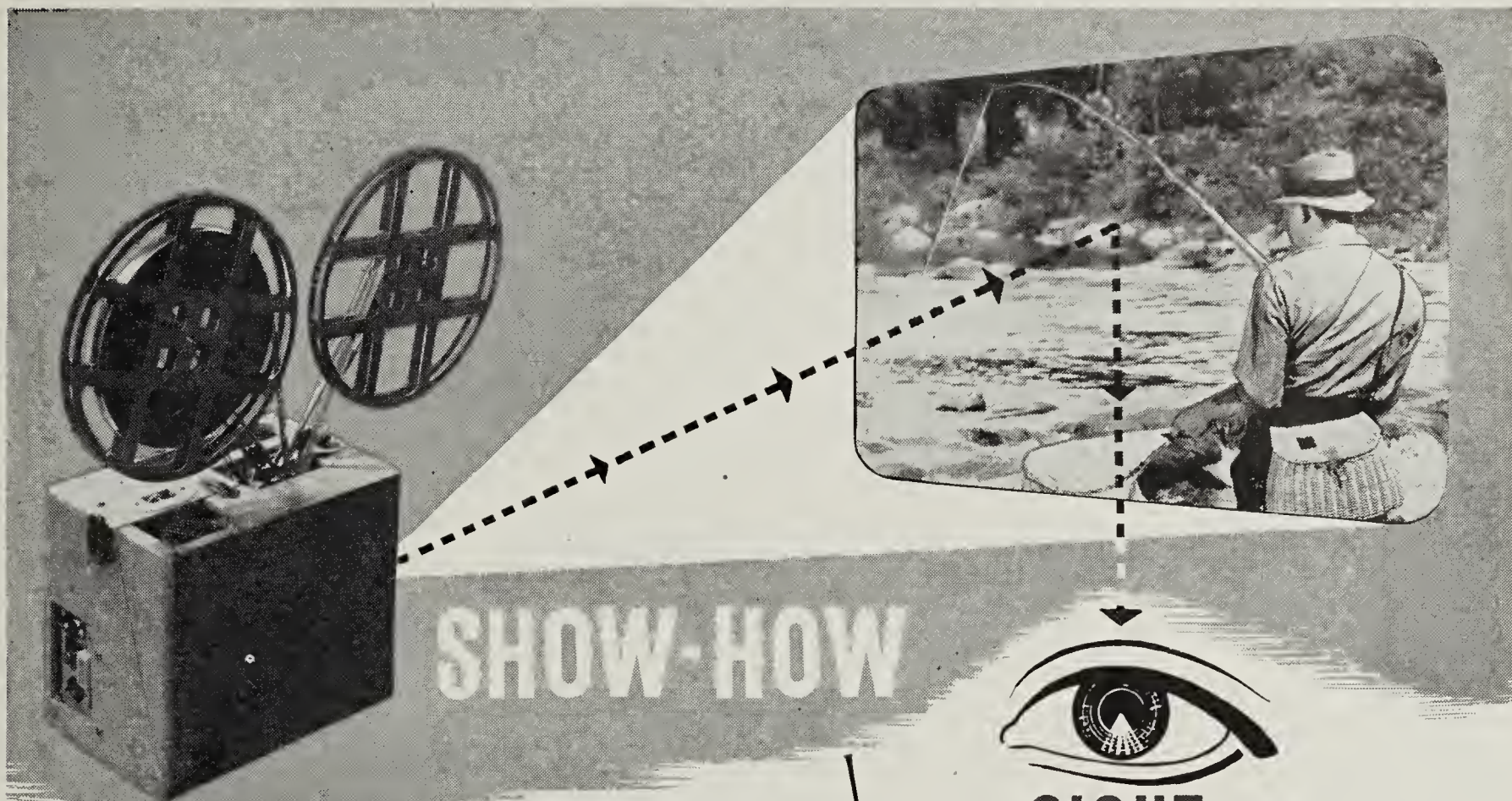
Naturally the Natives of a country make extremely interesting subjects for a cinematographer. However, you will find that if you simply stick your camera up in front of their faces and start shooting most of them will resent it and either turn their heads away or let you know they don't care about it.

It is easy to understand this if you will put yourself in their place. Here's the way I got perfect pictures every time. If I saw a Native coming along the road or a small group I wished to shoot, I simply had the guide go over and explain that I would like to take some pictures, and give them a few small coins, and the result was always smiles, and a readiness to let you shoot. Then, and then only, did I set up my tripod and go to work. However, there are some shots that if the Native knew his picture were being taken, it would lose all spontaneity, so on these, use your two or four inch lens.

There is one thing I want to impress on you in the strongest possible way: Be sure and take lots of close-ups after you take your long and medium shots, for close-ups make a picture.

Well, I believe I've given you most of the important things you should know before you leave on your trip. Next month I will give you an idea of just what there is in each of the countries of Central America that will interest a movie fan.

(Editor's Note:—Mr. Scott, for many years an amateur color movie enthusiast, just returned from a four and a half month's photographic trip via plane around Central and South America—shooting 14,000 feet of 16mm. color film, and nearly 1,500 color transparencies. Shortly after leaving Mexico, he discovered that information contained in the travel guide books he had read before departure was incorrect, so he proceeded to make detailed notes which eventuated in compilation of his Tour Guide which will be published within the next few months for the benefit of cinema and travel enthusiasts who plan trips to the southern countries. It might be mentioned that Mr. Scott was the founder of Scott Radio Co. and president until his retirement last fall. Currently, he is mapping an eight month's trip to New Zealand with Mrs. Scott.)



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PICTORIAL INTEREST IS WHERE YOU FIND IT

By JAMES R. OSWALD

PROBABLY every movie maker has a favorite locale which is given preference over all others in his picture taking activities. And this is as it should be, for it makes little difference whether that center of filming interest lies in Times Square, New York, or Jasper Junction, Wyoming, your best movies come from the place with which you are most familiar. Aside from the vicinity in which you live, this may be a cherished vacation spot, or merely a source of diversion, where leisure hours are passed away.

My favorite haven of refuge, and photographer's paradise involves a region in northern Wisconsin, having as its axis, Minocqua. It's small wonder this little town in the heart of the Northland has become as a second home to me. Whether it be the peaceful tranquility of a scheduled trout stream, the magnificent splendor of a drive through a virgin forest, or the thundering of horses hooves on the bridle path my scenario calls for, the setting is readily available, or within easy reach of this photographic wonderland.

Minocqua is unique as a town, in that the plot of ground it occupies was originally an island, although is now accessible by road and rail, as well as water, by scenic bridges which connect it with the mainland on one end, and picturesque tree-lined "fills" that join it on the other. Appropriately, Minocqua has been nicknamed *The Island City*, a name which has remained with it to this day.

Beautiful Torpy Park, on the shores of Lake Kawaguesaga, is the site of many of the town's special events, always a worthy focal point for the wide-awake movie maker. Swimming enthusiasts enjoy to the fullest their cool, refreshing dips in the unmolested, crystal clear waters of the lakeland

region, another source of activity for the action seeking cameraman.

Normally, Minocqua has a population in the neighborhood of 1,000, but being a resort town, swells tremendously during the vacation season. Minocqua's modern, up-to-date stores offer the last word in shopping facilities to "citified" customers, while its rustic log cabin resorts reflect the atmosphere of pioneer days for those who like to "rough it." It isn't at all difficult to understand why so many motorists traveling U. S. highway 51, through Minocqua, to points further north, make it a "must" to stop over in this little city, and often vow to spend their entire vacation in the vicinity the next year. It was in much the same way that I, myself, first became acquainted with the potentialities of this photogenic gem, though long before I knew what an *emulsion* was, or had heard of the complexities of a *dissolving shutter*.

But what has all this to do with your movie making? In what way can you, personally, benefit from the experience of a fellow filmer?

Well, maybe you're one of those persons who has traveled far and wide in your never ending thirst for adventure. You wanted to see new places and do new things. You skipped here and you skipped there, never stopping long enough in any one locality to take a second look. You had your movie camera with you, of course, but most of your pictures were taken, literally, with one foot on the car running board. You came back from your journey armed with souvenirs from places you had been. You bragged about the distance covered, and the short space of time involved. You had some good movies to back you up, too. But, be honest with

yourself. Didn't you feel there was something missing in these pictures? Were they the kind of movies that demand repeat performances . . . that the audiences want to see over and over again? Or were they of the type that, merely as a matter of courtesy, give rise to a few favorable comments, which can be seen through as clearly as the atmosphere that surrounds them?

All too often well-meaning, but misinformed, movie makers are inclined to overlook the very essence of a superb movie, blinding themselves to the simple secret readily available to all. They "can't see the forest for the trees." As a result, golden picture taking opportunities are passed by, in favor of a conglomeration of widely scattered, unrelated hodge-podge variety of fast-fleeting sequences.

Take a look at the pictures reproduced along with this article. It is difficult to portray on the printed page the significance such shots as these can have to a well-rounded screen story. But if you will get to know your subject matter from all angles before shooting, visualize ahead of time the possibilities, mingle with the people who will be in lens range, and become acquainted with their "inner-selves," and then go out to shoot what you have learned in such a way as to make your future audiences live the picture, then and then only will you come up with a home movie that not only tops all previous endeavors, but one that rivals all the academy award winners in Hollywood!

Your success as a movie maker, then, depends not so much upon where you have been, what you have done, or who you have met, but rather on your ability to sell, on the screen, what you have seen!



In the serenity of this secluded north woods cabin, and its surroundings, the author likes to plan future scenarios.



Beautiful Torpy Park, on the shores of Lake Kawaguesaga, is the site of many of the town's special events—always a worthy focal point for the wide-awake movie maker.



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WORLD-WIDE DOCUMENTARY FILMS

PAST PRESENT FUTURE

OF the many services utilized for behind-the-front prosecution of the war, the documentary film stands out as a most important factor in the achievement of ultimate victory. Experiences of virtually all of the Allied nations with the documentaries resulted in generating utmost cooperation of the home fronts for maximum efforts to provide the men on the battle lines with the necessary supplies and equipment.

But what of the future, and the place of documentaries in peacetime? There is no doubt but what the documentary will take a position equal in importance to the printed word for informative dissemination of important subjects of national concern and interest in all countries of the world.

Government Control of Documentaries

At this point, it appears that documentaries will be encouraged, subsidized, or produced outright in the various countries by the governments themselves. They will generate political thinking along the lines of the individual governments—which naturally will only sponsor subjects in line with the parties in power. But more important, if generally instituted, will be instructional documentaries aimed at various groups within the country to increase the production efficiency and way of life of various sectors of the population. This is especially true of agriculture, where the United States, Great Britain, and Canada, for example, have found instructional documentaries to be more informative to farmers for material increase of the land's productivity; better use of mechanical equipment; rotation of crops; etc.

But wartime experience has demonstrated that a specific phase of a subject can be best covered in a maximum of four reels. In fact, the documentary or instructional films have been found to give maximum results for sustained interest in about two-reel footage per subject, and later can be fully covered visually better than 100 pages of instructions in printed form.

Wide Opportunities for Cameramen

The post-war expansion of documentary production by various nations will provide expanding opportunities for cinematographers, both professional and advanced amateur. The latter can very easily swing over to a life job in a field for which they have enthusiasm. Especially in Great Britain and the United States, many of the men trained in service photographic units will readily find opportunities in the documentary fields rather than the present crowded camera crafts of studio production.

Industry Report

Indications of the extent to which the documentary films will be utilized in peacetime are contained in a symposium bulletin from the offices of the Motion

Picture Producers and Distributors of America. It states:

Out of the war years—when information was a vital necessity to men in uniform and to the people at home—there has come a universal interest in the use of documentary films. Great Britain, the United States and Russia called in their best available talent to make documentary visualizations of the war. Inspired by the genius of such men as John Ford, William Wyler, John Huston, and Frank Capra, came the well-remembered "Battle of Midway," "The Memphis Belle," "Fighting Lady," and that excellent series, "Why We Fight."

From Britain, beginning with "Target For Tonight" and including, among the most recent, "Western Approaches," came a fine succession of factual films portraying the beleaguered home front and the fighting abroad. Millions of feet of film were shot to make these documentaries. Some were edited into feature pictures ("The Way Ahead," "The True Glory," and others); some were brief messages flashed on the screen to teach the armed forces and civilians the surest way of survival. Today, the equally urgent need is to teach people to get along with each other. How shall it be done? Where the emphasis?

Comments by Disney and Grierson

Walt Disney, asked to say what part motion pictures can play in the postwar program, replied: "It is easier to create experts than to make good human beings. I believe the main concern should be to emphasize the well-integrated life." And from John Grierson, former Film Commissioner for Canada: "The ends men seek are identical and simple and concrete, whether they come black, white or yellow. They are concerned with food, health and housing and the other highly visible evidences of the good life. I have no doubt that when these are fought for and secured, the invisible aspects of the good life—whatever these may be—will come to inhabit the edifice we have built. In the meantime, it is in the fulfillment of actual and visible needs that we shall find the basis of a common philosophy and the only one in which the peoples of the world will any longer trust. In this progressive struggle for welfare which is actual, we all need the example of other countries, the example of other peoples' genius, other peoples' ingenuity and good fortune."

Canada's "World In Action" Series

Canada's contribution to international good-will through films produced under the supervision of Grierson was a series designed not only to win friends for that country by acquainting the world with Canada's way of life, but, at the same time, "without any pharisaical self-congratulation to indicate the fundamental tenets of democracy which might be used

in building up progressive groups in every country." Such titles as "War For Men's Minds," "Labor Front," "Global Air Routes," "Inside France," "When Asia Speaks," and "Now the Peace," give some idea of what was set forth in this excellent series which is still showing in theatres all over the world.

English Documentaries Important

As developed in England, the documentary film was a great factor in welding the people into a solid unit during the war, due largely to the fact that the technique had been mastered earlier, under Grierson, Paul Rotha and others. We, in this country, who are proud of our picture-making skills, have much to learn from them in the art of producing the film that teaches by means of simple, realistic, human-interest stories. One of their recent releases, "Children of the City," found great favor in the United States, especially among socially-minded groups.

USA OWI-Overseas Activities

Taking a leaf out of these studies, our OWI-Overseas Division, under the direction of Robert Riskin, prepared a series of American films for showing in the formerly occupied countries of Europe. Among them were "The Story of the Jeep," setting forth our industrial "know-how"; "Colorado City," depicting the way one city has made its plans for reconversion; "Washington, D. C."; and "Tuesday, November Second," which describes our electoral system. Few people have been privileged to see these pictures in this country, but it is hoped that they will be given non-theatrical showings at some later date.

UNRRA Collecting Films

UNRRA is gathering from far and wide a collection of films that will further its work. The British Ministry of Information film division has supplied a "Report" picturing the supply and distribution of relief to displaced persons; also, "Star and Sand," a film dealing with the Yugoslav camp set up in Egypt. Canada is filming a picture in Greece, titled "Out of the Ruins"; an Italian company is making a film portraying what UNRRA is doing in that country; and the U. S. Army is making a two-reel subject, "The Last Battle," which will probably be released in our theatres as well. In China, Russia, South America and other countries, there are plans under way for similar contributions.

Documentaries Aimed For Adult Education

The documentary as distinct from the classroom film may be considered as a tool for adult education. From China comes word that mobile units are being developed at Nanking University to carry films far back into the provinces of Changtu and Chungkind—a difficult undertaking, where roads are often almost

impassable. The barrier of language is a problem, but one of these days we hope for an exchange and the opportunity of seeing such Chinese-made documentaries as "China's Pattern of Peace," and "The Voice of China," with English commentaries. There are ambitious plans for the establishment of what are interestingly called "Halls of Dynamic Learning" in five of China's forward-looking universities, where both 16 mm. and 35 mm. projectors will be available. "Visual aids are the best means of communication and unification," says one of their leading educators. "We need them—and quickly."

Plans for the Netherlands

In the Netherlands, the Dutch government has set up a program under the direction of Mr. Joris Ivens to bring education to the Indonesian people through films. Now chiefly composed of pictures obtainable from other countries—travelogues, human interest, and war-reporting films demonstrating the victory of the democratic forces of the United Nations, it is the hope of Ivens and his staff that they may soon be producing native-language films and that, one of these days, they may be exporting special subjects giving to the rest of the world some idea of the customs, the work, the art, and the laughter of the peoples of that Pacific empire.

"The Wheels Turn Again" is the poignant and significant title of the first documentary to come from France, pointing to the terrific devastation of its industry and the problems to be faced in

again putting its wheels in motion. In the series that is planned for theatrical and non-theatrical showing, with English and French titles, we are doubtless witnessing the re-birth of France's unique cinema art.

Informative Entertainment Series

What of the documentary in our own country? With the disappearance of the factual and semi-factual war reporting films, what may we expect to follow? Two important series come instantly to mind. First, "The March of Time"; and second the series titled "This Is America." Both are released as entertainment subjects in the regular theatres.

Documentary Technique in Features

The influence of the documentary technique is to be seen invading the pattern of our theatrical feature films. "The House on 92nd Street" was an excellent example. M-G-M's treatment of William L. White's factual report of our ignominious retreat from Bataan and Corregidor, "They Were Expendable," is definitely in that category. Without heroics or glamour, yet on a magnificent scale, it depicts the story of the crew of a little PT boat who sacrificed their lives to what seemed—at the time—to be a lost cause.

Col. William Wyler's first peacetime assignment, "Glory For Me," which he will direct for Samuel Goldwyn, is somewhat more fictional, yet it has its roots in real life. Dore Schary's picture, "They Dream of Home," is an honest effort to

bring to audiences a realization of today's adjustments.

When documentaries are produced (as it is proven they can be) so that they grip the emotions as well as inform and teach, they will undoubtedly find their way in increasing numbers into the regular theatres where they may touch the minds and hearts of millions to be reached nowhere else, and so contribute in large measure to our shining dream of one world and an era of lasting peace.

New Film Studio for Egypt

A new motion picture studio is being built in Cairo, Egypt, by Salomon Salama. According to information provided by the latter, it will be the most modern studio in the entire Near East, having three stages and being equipped with the latest apparatus developed by American manufacturers.

Equipment, purchased through intermediary of Teca Corporation of New York, includes a Mitchell BNC camera, Blue Seal sound recording systems, background projector, Mole-Richardson lights, Houston automatic developing machines and printers, Moviola viewing machines, etc.

Salama recently spent some time in the United States selecting the latest equipment and observing production techniques. He intends to employ American-trained production technicians and personnel where possible in the Cairo studio.

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AMONG THE MOVIE CLUBS

Amateur Movie Society, Milwaukee

Amateur Movie Society of Milwaukee is one of the several progressive clubs which meets twice monthly. June 12th session had film program presented by Kenosha Movie Makers Club, and included the following subjects: "Swedish Smorgasbord and Folk Dances," "This Is America," "Sand in Our Shoes," and two series of slides. At the June 26th meeting, illustrated lecture on Ansco color film and how to use it was presented, along with a rousing gadget night auction.

In current bulletin of the club, announcement of the 1946 annual contest for members is made for both 8 mm. and 16 mm. entries. Closing dates and judging of both classes are set for mid-November, and handsome trophies will be presented to winners in each group.

Winners in the recent club novice resulted as follows: For 8 mm., first, "Easter Show," by Earl J. Peychal; second, "V-Garden," by Martha Rosche; third, "Great Names in History," by W. Vogel. In the 16 mm. division, Selma Preuss won first prize with "Autumn Glow;" second was Ray J. Fahrenberg's "Wisconsin From the Air," and Walter Chapelle took third place with "Ice Bound Niagara."

Kenosha Movie Club will act as host to members of the club at annual picnic to be held at Petrifying Springs Park, Kenosha, during the summer.

Los Angeles Cinema Club

Maintaining the usual high standard of its programs, June meeting of the Los Angeles Cinema Club presented productions in both 16 mm. film and 35 mm. color slides. Latter portion of the program was through courtesy of Pictorialist, and proved decidedly interesting to the members present.

Lt. Gae Faillace, LACC member for many years, was guest speaker of the evening. Official photographer with General McArthur in the Pacific campaign, he detailed some of his most interesting experiences of the past four years, and concluded with showing of some of his interesting 16 mm. pictures. "Our Amazing Northwest," a 16 mm. two reeler, was presented by C. Oscar Perrine.

Tri-City Cinema Club

Joint meeting of the Tri-City Cinema Club, Blackhawk Camera Club, Rock Island Camera Club, and Moline Photographic Society was held at Moline on the evening of May 23rd to a large audience. Solon exhibition of prize winning pictures of the past year, and outstanding colored slides, were presented by the three camera clubs. Film program arranged by Tri-City included: "Silver Skates," by Tom Griberg and "Arizona and Mesa Verde," by Dr. H. H. Parsons.

Brooklyn Amateur Cine Club

Charles Benjamin was elected president of Brooklyn Amateur Cine Club for the ensuing year, with other officers comprising: Herbert Erles, vice president; Albert Groman, treasurer; Eugene E. Adams, secretary; and Irving Gittell, Francis Sinclair and Horace Guthman, directors.

June 5th meeting held at the Hotel Bossert was the annual get-together session, with Ed Preisel preparing a program which comprised showing of a film for general criticism and comment from the entire club after the running. Preisel then pointed out errors overlooked by the audience, and again projected the film to allow members to observe the faults and errors discussed. Annual dinner party, shelved during the war years, was resumed on the evening of June 19th at the Village Barn in Greenwich Village.

Utah Cine Arts Club

Color film displaying the beauties of Yellowstone National Park highlighted the June 19th meeting of Utah Cine Arts Club at Salt Lake City. Latest of the technical series discussions featured at each meeting dwelt on demonstration of several makes of movie cameras and various accessories. This portion of the program has caught on with members, who are enabled to get a comparison of various brands of equipment to enable them to make more careful selection of models required for individual requirements.

Officers are preparing plans for a big outdoor show and annual club picnic in Mill Creek Canyon, to be staged within the next month.

Los Angeles Eight

June 11th meeting of Los Angeles 8 mm. Club was held at Arden Farms Clubhouse, and presented film program which included: "Grand Canyon," by Max Rapp, and "Aztec," by Mr. Ibsen. Sylvia Fairley won the first prize roll of kodachrome in the May 50 foot contest with "There Ain't No Justice." "Swim Meet," by Fred Evans, tabbed the second prize roll of film, while Lewis Reed slipped into third spot with "Bringing Down Father."

Cinema Club, San Francisco

June session of Cinema Club of San Francisco was held on the 18th at the Women's City Club with Larry Duggan arranging film program for the evening, which included: "Yosemite Seasons," (16 mm. kodachrome) by Mrs. Margaret Bogman; "Hitting the High Spots," (8 mm. kodachrome and black-and-white) by Duggan; "Sandra," (16 mm. kodachrome) by E. L. Sargeant; and "Peonies," color film roundup which several members shot at the recent club outing at Hayward.

Metropolitan Club

Annual meeting of Metropolitan Motion Picture Club of New York City was held on the evening of June 20th at the Pennsylvania Hotel, when members voted for four directors to serve three year terms. At the same meeting, screenings of films entered in the Novice Contest were held, with members voting for the winners of three cash awards offered by member Harry Groedel.

Current announcement discloses two club contests for 1946-47, providing members with opportunity for planning movie-making during the summer vacation period. Novices' contest, for members not classed as advanced filmmakers, will have three cash prizes again donated by Harry Groedel. Entries will close on January 31, 1947, with judging by entire membership at the February, 1947, meeting. Only one entry per member is permitted, with maximum length of 16 mm. to be 800 feet, and 400 feet for eight mm. General contest, open to all members in good standing for submission of one subject each, has no limit on footage in either size film. Entries will close on November 1, 1946, with special committee of seven judges to view the entries and select the winners.

Philadelphia Cinema Club

James Maucher presented an illustrated lecture on "Making Professional Appearing Titles" at the June 11th meeting of Philadelphia Cinema Club, which was held in the Witherspoon Building.

Sound film, "Historic Philadelphia," with narration by Lowell Thomas, was also on the program and gave members an idea of what to film around the city for interesting subjects. President Francis Hirst projected his "Perils of Paul" and "In the Heart of the Rockies."

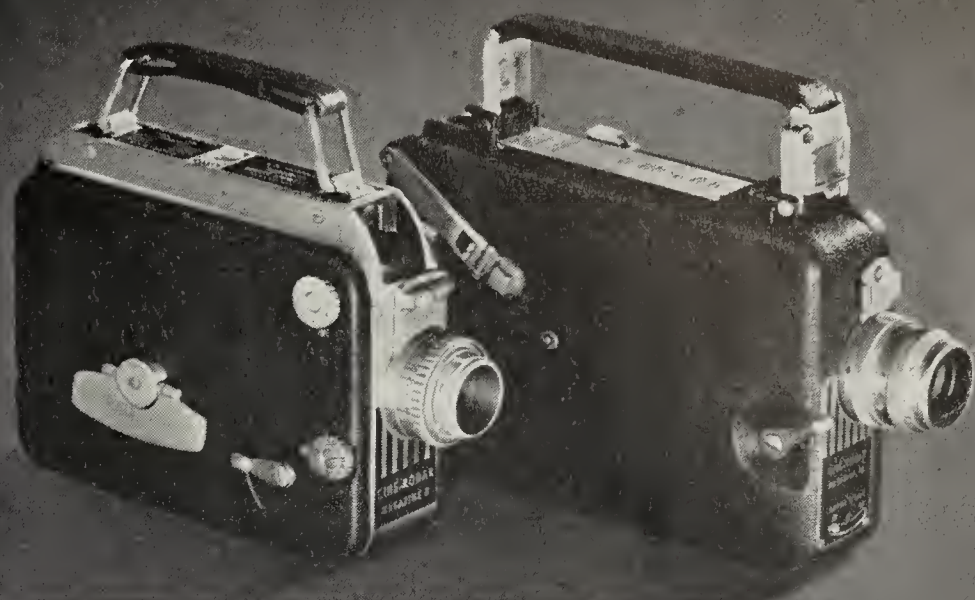
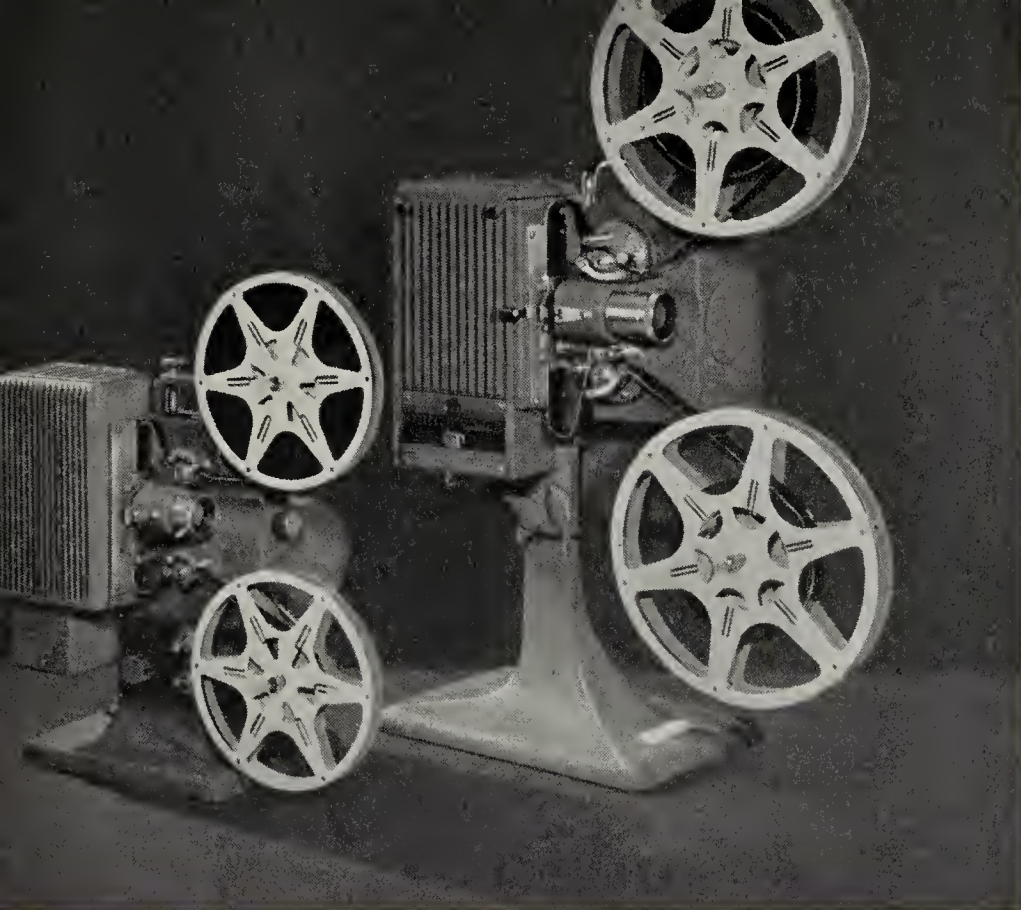
On July 14th, club members will journey to the summer home of Dr. Robert Haentze on the latter's invitation, for another great outing at the location.

Seattle Amateur Movie Club

Seattle Amateur Movie Club held regular monthly meeting on June 11th in Parish Hall of the Church of the Epiphany, with large portion of the meeting devoted to discussion of outstanding features of various types and makes of cameras and other equipment. Film program included showing of "Meshes of the Afternoon," from library of Amateur Cinema League.

Amateur M.P. Club of St. Louis

May meeting of Amateur M. P. Club of St. Louis was highlighted by showing of "Museum of Memories," 300 feet of 8 mm. kodachrome which was entered in the club's annual contest and adjudged best of entries.



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KODASCOPE EIGHT-33—low-cost, 500-watt lamp, $f/2$ lens. KODASCOPE SIXTEEN-10—reasonably

priced, 750-watt lamp, $f/1.6$ or $f/2.5$ lens; accepts other lenses, other lamps. KODASCOPE SIXTEEN-20—same lens-lamp versatility, plus push-button operating convenience. SOUND KODASCOPE FS-10-N—reasonably priced sound *and* silent 16mm. projector of exceptional tonal qualities.

Quantities still small in comparison with demand. Keep in touch with your Kodak dealer.

The Kodak movie accessory picture, in many departments, is reassuringly bright. *Lenses, filters, carrying cases, film reels and cans*—many are on your dealer's shelves today, others are on the way, and by year's end you should be able to obtain just about every Kodak movie accessory supplied prewar . . . with many offering marked functional advances. Keep in touch with your Kodak dealer.

—and how about Ciné-Kodak Film deliveries?

Trouble with film, of course, is that civilian film production started from scratch a few months ago. Kodak had none . . . dealers had none . . . you had none. To supply *all* dealers with *all* film types for *all* customers adds up to a tremendous total—which Kodak is doing its level best to provide—and in the face of difficult manufacturing, shipping, and distribution problems . . . Eastman Kodak Company, Rochester 4, N. Y.



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Kodak

The New Norwood Exposure Meter

By RALPH A. WOOLSEY and CHARLES H. COLES

(Photo Research Corporation)



Fig. 1. Closeup balanced and exposed according to technique described article.

WHEN the Norwood Director meter was first introduced to the studio cameramen in Hollywood a few years ago, its radically new design elicited some raised eyebrows and skeptical comments. However, the continued success of its users in achieving accurate exposure control has stimulated a wider and wider use of the meter until now it may be found in studios all over the world.

Constructed of an improved translucent material, the patented hemispherical light-collector is now known as the "Photosphere." The designers of the meter have greatly increased its scope of usefulness by making the Photosphere interchangeable with two accessory light-collectors, so that the instrument now performs the multiple functions of an incident-light exposure meter, a light-

intensity (foot-candle) meter, and a brightness-range meter.

Still the heart of the Norwood Director, the Photosphere simulates the camera side of any three-dimensional subject. In use, therefore, it is simply held near the subject and pointed directly at the camera. In this position it integrates all the useful photographic illumination irrespective of the angle at which it strikes the subject. If it happens that the indicating pointer is not conveniently in view, the meter body may be rotated around the pivot connecting it to the Photosphere base until the dial faces the observer. This feature is a convenience that cameramen have greatly appreciated. Among its advantages they have discovered are the elimination of interference from shadows

cast by the user and the ease of making readings in close quarters.

The Director shows its supremacy when working under lighting conditions considered unusual or difficult for other methods of exposure determination. Entirely lacking is the uncertainty experienced with the varying indications of most meters as they are tilted slightly one way or the other. Owing to its unique design, the Director has eliminated this critical directional sensitivity. The pointer holds its position without fluctuation even when side on backlighting is encountered since no special precautions are necessary to assure accurate reading. The Photosphere integrates light from any direction with equal effectiveness.

It is in color photography that the Norwood Director displays its accuracy and consistency to the greatest extent. It measures, integrates and evaluates incident light so that the flesh tones of a subject will always appear natural as long as the light has the proper color temperature. Because these tones are the most critical, their accurate reproduction will assure fidelity in all other colors in the picture. Even though the background is light or dark, flesh tones will always appear correct.

In addition to determining the overall exposure, the new Director measures other important photographic factors by means of interchanging the photosphere with special light-collectors. Lighting contrast control is facilitated by the use of the "Photodisk" which provides illumination measurement over a range of 0-10,000 foot-candles, assuring a quick, accurate means for measuring the intensity of key or other light-sources.

A reflected-light attachment, the "Photogrid," is used with the Norwood Director for brightness measurements or brightness range control. The Photogrid may also be used if it is possible to read the incident light for exposure determination.

Two models of the Director are now in use. The Cine model, designed for motion picture photography, is calibrated directly in f-stops from f/1.4 to f/22 for a constant shutter speed. Adjustment for various emulsion speeds is provided by interchangeable perforated metal slides which are inserted behind the light-collector to control the light reaching the photoelectric cell. A computer allows use of the meter for still photography by facilitating the selection of shutter and

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- 1 Bausch & Lomb Baltar 35 mm f 2.3 coated lens

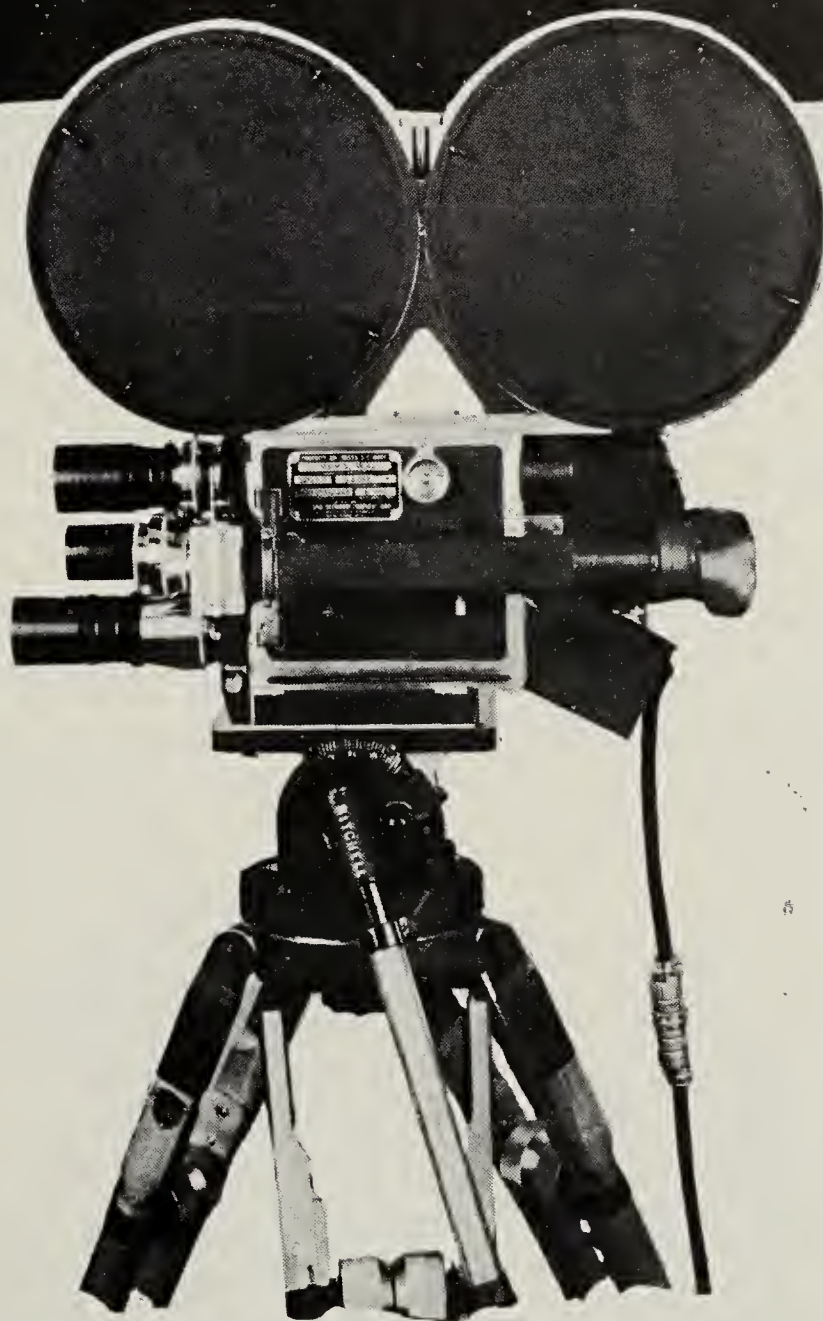
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- 4 Exciter Lamps
- 2 Microphones with cable, gooseneck and baffle
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- 1 Tripod (pan) handle
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- 1 Baby tripod with carrying case and Hi-Hat
- 1 Tripod with freehead and boot and saddle
- 1 Triangle
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TOTAL PRICE.....\$9,990.00



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Fig. 2. Measuring key light intensity with Photodisk pointed at source.



Fig. 3. Adjusting shadow illumination to desired contrast balance with key, using Photodisk pointed at fill light.



Fig. 4. Determining exact exposure with Photosphere pointed at camera.

iris combinations other than those indicated directly on the dial and also converts f-stop readings into foot-candles.

The Universal model, for both still and motion picture photography, is calibrated in light-values. Exposure calculations are made with a computer which indicates iris and shutter settings through a wide range for any emulsion speed. Two ranges of light-levels may be measured. The change from the low level to the high is accomplished by insertion of a multiplying slide behind the light-collector.

Using the Meter

While illumination balance is determined by the individual cameraman's artistic requirements, it is nevertheless possible for him to control this balance more consistently and accurately than before with the new Norwood Director. With this meter, for example, an initial light-level may be established on a set at the principal subject which then becomes a reference brightness against which the rest of the set may be balanced visually.

The following is an illustration of one method for lighting to a contrast ratio of 4 to 1, using the Director Universal model meter. Plus-X film exposed in the studio at 1/50 second at approximately f/2 is selected for purposes of discussion.

1. Set computer for Weston film speed of 40, assuming this is correct for the laboratory. Moving f/2 opposite 1/50 second on computer will show that a light-value of 100 will be required for normal exposure.

2. Hold meter with Photosphere at point of principal interest in scene and point Photosphere at camera.

3. Adjust key light until meter indicates slightly less than 100.

4. Replace Photosphere with Photo-

disk and point directly at key light, noting intensity. With disk in place, light values on scale become foot-candles.

5. Switch on fill light and point Photodisk at it. Adjust intensity of fill until $\frac{1}{4}$ of key light. Principal subject is now lighted with correct balance. Kicker or backlight will not alter this key-to-shadow ratio appreciably.

6. Using brightness of principal subject as a reference, balance rest of set to it visually. If desired, meter may be used for checking lighting balance of set at various points in background.

7. If unusually light or dark areas appear in set, their brightness in candles per square foot may be measured using Photogrid on meter and pointing it at close range at these areas. Reference to computer will show whether they are too light or too dark to fall within film range. If outside permissible limits, lighting adjustments may be made to correct situation.

8. Return to principal subject position and point meter with Photosphere in place at camera. Meter will now give exact lens aperture to be used, which will be very close to f/2 originally decided on.

When using the Norwood Director outdoors, the method is essentially the same. Since the key light is usually the sun, its intensity in foot-candles is measured first with the Photodisk in place. From this value is computed the illumination needed in the shadows to obtain the desired balance. Reflectors or booster lights may then be adjusted until the shadow reading is brought to the computed level. Finally the Photodisk is replaced by the Photosphere which is then pointed at the camera from the subject position and the correct exposure read.

Lighting setups may be duplicated at

a later date simply by keeping a record of the intensities or balance of the lights used for a particular scene. Key and other light sources may be switched on one at a time and their respective intensities measured with the Photodisk in place on the meter.

With the three interchangeable light-collectors, the Norwood Director becomes a truly universal instrument designed to solve and exposure problem. Its logical and direct means for exposure determination through the measurement of incident light results in highly accurate readings under all conditions. The meter is easy for the cameraman to use and requires a minimum of study.

It should be emphasized that the exposure meter is only a tool used by the cinematographer in establishing lighting condition under which he chooses to work. Once this is done the instrument has fulfilled its purpose. The new Director provides a means for controlling these conditions more quickly, allowing the cameraman more time for concentration on his artistic efforts.

Gordon Mitchell Heads New Industrial Film Concern

Gordon S. Mitchell, former manager of the Research Council of the Academy of Motion Picture Arts and Sciences, is president of All-Scope Pictures, Inc., recently incorporated to produce educational and industrial films.

Production personnel for the organization will consist mainly of ex-service men who had wide experience in production of Army and Navy training films, including Fred Mandl, A.S.C., who was a Signal Corps cinematographer with M/sgt. rating during the war.

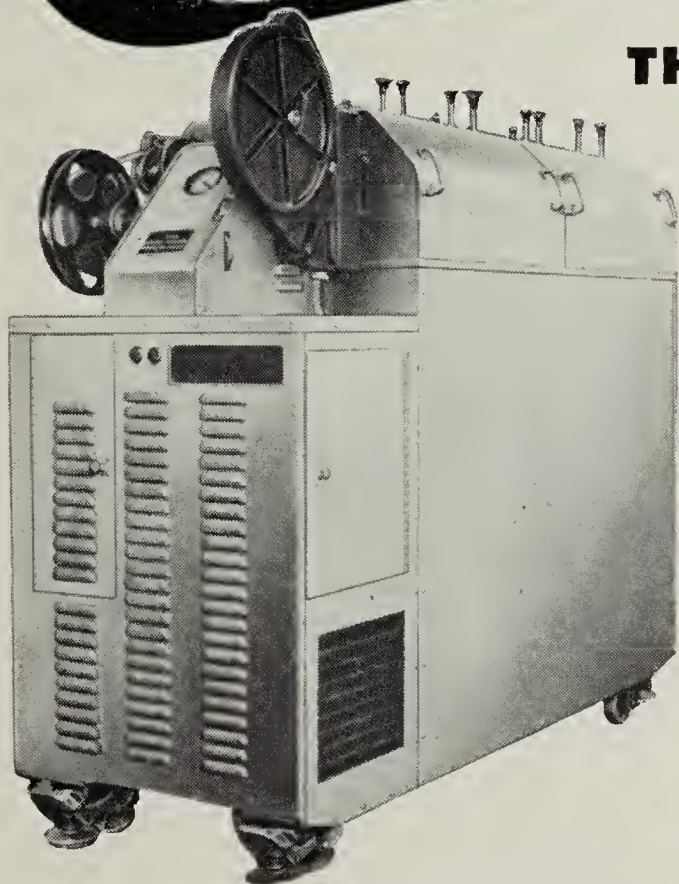
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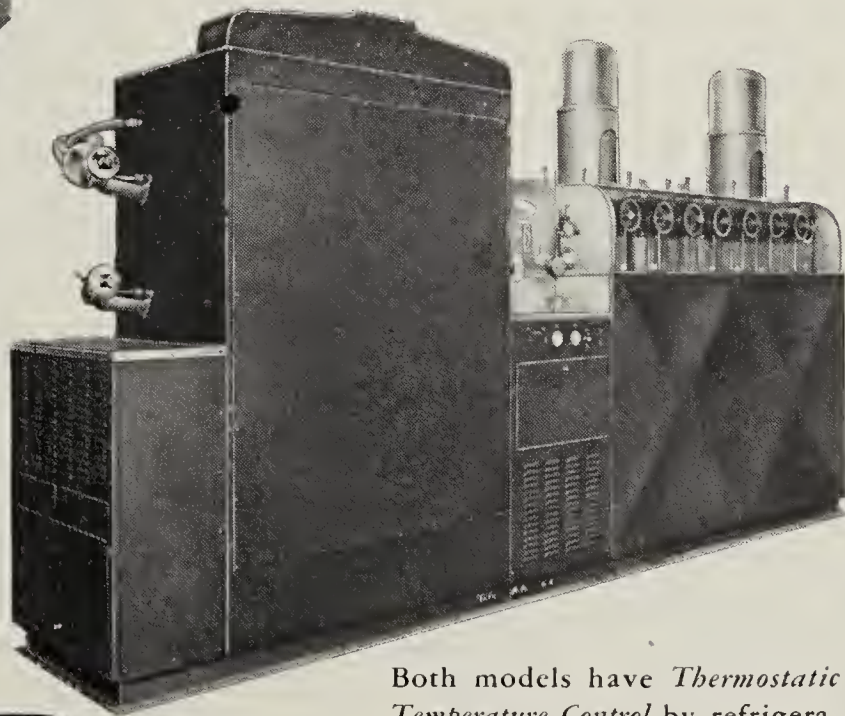


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CINEMATOGRAPHY IN THE WAR

Instructing U. S. Signal Corps Photographic Companies with Major Art Lloyd, A. S. C.



IN the early months of the entry of the United States into the war, various branches of service naturally competed in securing the enlistments of experienced motion picture photographers from Hollywood. But it was only a short time before that source of supply dried up, and—with the Army Signal Corps planning expanded war zone activities for still and motion picture photographers—it was necessary that special photographic companies be thoroughly instructed and trained for eventual assignments.

Major Art Lloyd, A.S.C., was one of the Signal Corps officers assigned to handle such elemental and advanced training in cinematography. Commissioned with rank of Captain in April, 1942, he was assigned to the Signal Corps Photographic Center at Astoria; and from there immediately got roving assignments to head photographic units which covered the Japanese evacuation from Pacific coast areas to relocation centers; tank training and maneuvers of the Third

Armoured Division on the California deserts; barrage balloon training films at Camp Tyson, Tennessee; instruction reels on operation of the long-tom gun; and films depicting operation and performance of the Duwk, the sea-going-truck.

After such intensive and extensive photographing activities, Lloyd was called on to head one of the many training units which were set up to provide instruction to the Signal Corps photo companies which had to be established to secure the necessary manpower for the proposed photographic units which were eventually to be assigned to each Army that would hit the beachheads of France for the invasion and conquest of Germany. With a wide background of cinematographic experience in the Hollywood studios, Lloyd nevertheless was required to take a brief course on Army procedure in teaching of both officers and enlisted men.

Initial Instruction Course
First assignment of Captain Lloyd

and his staff was to train the 166th Signal Photographic Company stationed at Camp Crowder, Mo. This covered a span of nine months; and later with the same outfit to Tennessee, and Wisconsin. At the latter point, two units of the 197th Signal Photo company were instructed while on winter maneuvers.

The Signal Corps, in setting up about 15 Photographic Companies, had each of the latter comprising about 165 officers and men; with laboratory units, camera repair units, supply men, drivers in motor pools, and identification units. It was found that many in these companies had previous 16 mm. or still photography experience, which proved a great asset. If any were found in such companies with sufficient actual production experience in Hollywood, they were culled out and shipped overseas immediately.

As it was necessary to instruct the companies in both Army procedure and photography of both motion picture and still classifications, the photo instruction had to be dovetailed in between Army



Trainees learned how to edit their own film shot during instruction courses.



Motion picture camera crews of Signal Corps Photo Company 166, who received cinema instruction from Major Lloyd.

training. All teaching was in actual production technique as practised in the studios and in the newsreel fields. Photo training was materially expedited in the field where the various units were stationed for training.

Phases Covered

Instruction course, as uniformly established by the Signal Corps, started at the

basic fundamentals—how to handle the tripod; thread camera; proper exposures, and continuity of action. Latter was most necessary, as most of the men would be on their own in the field and could not wait for advise or instructions from headquarters on what to shoot during battle action.

Orientation in photography; basic

motion picture and story coverage; nomenclature of cameras, lenses; film loading; purpose of long shots, medium and closeups—and when best to use each—were early subjects in the photo training. Then instruction swung into phases of film types and filters—with meter speeds of each; slates and captions; panning and tilting; care of cameras and films

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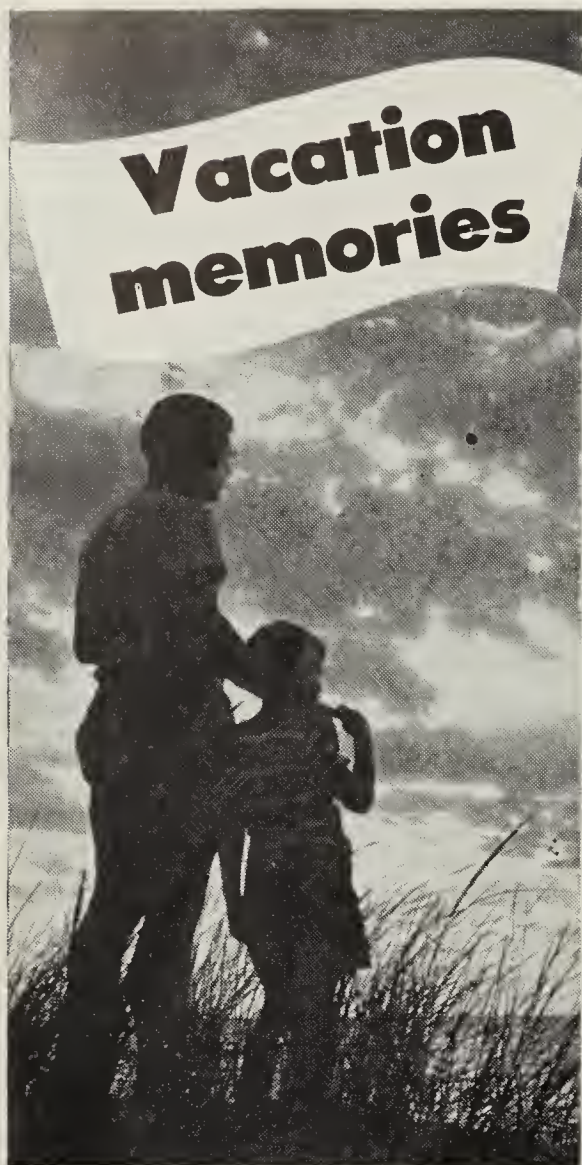


Photo by Arthur C. Allen, for Camp Leelanau

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in both the Arctic and tropics; balance and frame; film editing and cutting. Handling and operation of the Mitchell, Bell & Howell, Wall, Akeley and the various 16 mm. cameras were thoroughly explored for the training.

Before finishing the training and getting passing marks, each trainee had to shoot and submit a minimum of five shots—long, medium, closeup, insert, and re-establishing shot—all on his own without assistance.

One important phase was the proper manner to hold an Eyemo camera by hand to give a steady picture. As taught, this provided for holding the handle with the right hand—with the left hand having a full and firm hold on the bottom front below the lens. All weight must fall on the left hand, with the right balancing for steadiness. Work of the trainees during the course was processed and gone over to point out to individuals their mistakes in setups, composition or shooting. Those failing to pass the course—which proved to be a relatively small percentage of the whole—were transferred to other branches of Army service.

The Signal Corps instructed in excess of 3,500 men in cinematography through the photo company instructional system, and the students worked with both 16 and 35 mm. equipment and film, together with obtaining thorough techniques of the two sizes of film.

The completed instructional course as mapped by the Signal Corps covered a total of 17 weeks.

Export of Lighting Equipment Grows

Foreign motion picture films, particularly in India, are placing huge orders for photographic lighting equipment, according to Bardwell & McAlister, Inc., Hollywood manufacturers of the famous B & M Spots and other photographic equipment. Large shipments are also being made to Egypt, Sweden and Panama. The huge demand for these products from India is due to the fact that India has the largest motion picture industry in the world, with the exception of the United States. According to Mr. Ambalal J. Patel, the East Indian representative of Bardwell & McAlister, who is also a leading motion picture magnate, they produce in excess of 200 feature films per year.

La Casa, Alhambra

Ninth anniversary program of La Casa Movie Club of Alhambra, California, was held in the YMCA Building on the evening of June 17th, with D. W. Gardner as chairman. Film program comprised short reels of various subjects shot by members. Those providing 50 foot subjects in 8 mm. included: R. B. Vail, H. S. Wallace, D. A. Powell, A. J. Zeman and O. C. Jessen. Subjects comprising 100 feet of 16 mm. were credited to: Frank Knaus, C. L. Ritter, L. W. Lantz, Mrs. Marjorie Conrad, J. H. Clay, Mrs. R. Gillmann, Miss Monda Taylor, Guy Nelli and H. P. Carnahan.

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Victor Cameras and Projectors Reported Stolen

Cameras as well as projectors appear on the list of Victor equipment reported stolen recently. One loser is a former army man who reports the theft of a Victor model 5, serial number 15823 with F 2.9 and F 1.5 lenses.

While this camera was taken at the time the owner was stationed in Bremen, Germany, it may turn up in this country. If found, please notify Mr. G. D. Gillis, Hotel Holland, 351-359 West 42nd St., New York 18, N. Y.

Another camera, Victor Model 3, serial number 5313, with extra filters and telephoto lens, was taken from a car parked at Pico (navy) Landing, Long Beach, Calif. Notify Kenneth C. Wagner, 315 West 4th St., Davenport, Iowa.

USO Club Loses Victor

A Model 40B Animatophone, serial 93230 was stolen from USO Club, Neosho, Mo., between April 9th and 12th. Please notify Mr. E. A. Moyer.

Edward Doyle, National Director, Hospital Motion Picture Service, National Headquarters, the American Red Cross, Washington 13, D. C., reports that their 16mm. Projector No. 99270 has been stolen from Nichols General Hospital, Louisville, Kentucky.

The Victor Animatophone projector, Model 40, serial number 109796, without speaker, was taken from an auto March 28. It is the property of Mr. H. O. Babb, director of religious education, Christian Churches, Fort Worth, Tex.

A Model 40B Victor projector, serial number 91978 and unit J, 12-inch speaker, have been reported stolen. They are the property of Watchung Area Council, Boy Scouts of America, 133 East 6th Street, Plainfield, New Jersey.

Red Cross Reports Loss

A Victor Animatophone Model 40B, serial number 99270 has been reported stolen by the American Red Cross, Nichols General Hospital, Louisville, Ky. Finder please notify American Red Cross or The Falls City Theater Equipment Co., Louisville, Ky.

Victor Animatophone, Model 40B, serial number 109796 was stolen March 12 from Mr. Joe R. Babb, 2704 University Ave., Fort Worth, Texas.

Three Victor Animatophones, models 40B, all with Unit "J" 12-inch speakers have been stolen from Mr. J. A. Volk, 76 Rutgers St., Maplewood, N. J. The serial numbers of the stolen machines are: 87274, 79799 and 77173.

Victor Projector, serial number 96008, has been reported stolen from the American Red Cross, Billings General Hospital, Ft. Benjamin Harrison, Indiana. Please notify Mr. Edward Doyle at Red Cross National Headquarters, Washington 13, D. C., if found.

Major Edwin D. Easley, Air Corps Provost Marshall, Roswell Army Air Field, Roswell, New Mexico, reports that a United States Model B-1 Victor 16mm. Motion Picture Camera, No. 44812, lens No. (1) 309000, (2) 309328 and (3) 309,063, was lost or stolen from that station on or about March 9, 1946.

Naved Announces Convention Plans

The first post-war Convention and Trade Show of the National Association of Visual Education Dealers will be at the Continental Hotel, Chicago, August 5 and 6, according to plans announced by NAVED'S board of directors.

There will be exhibits of equipment, a new feature of this year's convention.

British Optical Expert Here

CHICAGO, Ill.—For the purpose of exchanging technical information concerning precision optical manufacture, Harry W. Martin, chief optical inspector for the famous British firm of Taylor, Taylor, and Hobson, Ltd., spent two weeks during May at Bell & Howell's Lincolnwood Laboratories in Chicago.

Gettysburg Address as Short Subject

Lincoln's Gettysburg address has been filmed in 16mm. color by Neil McGuire, and will be released through Planet Pictures, Inc. McGuire has utilized miniatures, animation and live action to dramatize this immortal document.

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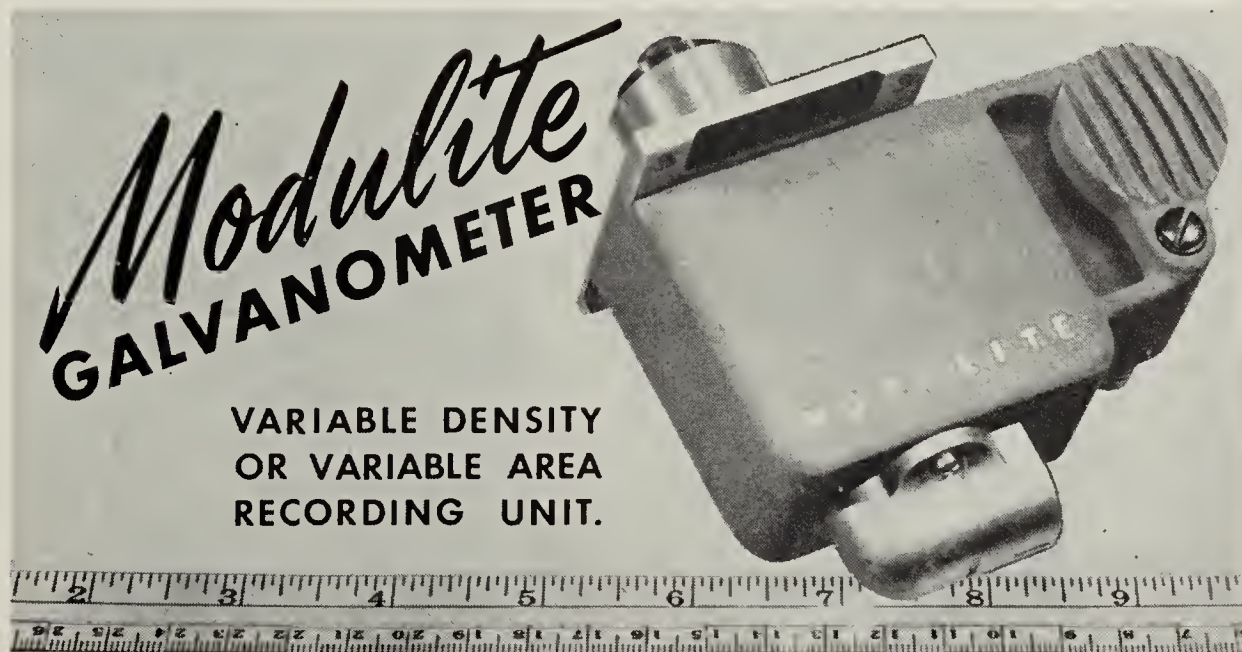
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To assure yourself of the earliest possible delivery we urge you to place NOW through your dealer your order for the lens you have selected. You will be repaid for your patience manifold with the satisfaction derived from its use later.

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AC-7

Trans-Atlantic Flight Movies

"Shannon Airport, Erie.—World premiere showing of sound motion picture Universal's "So Goes My Love" just completed on Pan American World Airways Constellation Trans-Atlantic flight gander to Shannon. Passengers report sound and picture reproduction excellent. Filmosound projector functioned perfectly at 15,000 feet and three hundred miles per hour (signed) Captain O'Connor, Pan American World Airways."

With the receipt of the foregoing cable on April 15, officials of Bell & Howell Company learned that their new air-borne Filmosound projector had screened the first routine aerial movie show with success. Designed especially for this event, the new machine ushers in an even more enjoyable era in air transportation and passenger entertainment.

Since every available cubic foot of space and every pound of weight are at a premium when placed in the air, the movie equipment had to be designed accordingly, and the results are a tribute to the ingenuity of Bell & Howell and Pan American engineers involved. Usual Bell & Howell quality was maintained in every respect, despite changes in construction and design which were found necessary in order to modify the equipment for the purpose. Because the projector must operate off the plane's regular 24-volt D.C. power supply, special designing was required with reference to projection lamps, amplifier circuit and parts, and the projector motor.

During operation, the Filmosound is supported by means of collapsible brackets and a folding shelf, attached to the water cooler at the rear of the cabin, which supports are quickly dismantled and stowed out of sight between shows. Ideal distribution of sound, despite the peculiar acoustic conditions encountered, is afforded by a series of small speakers spaced along the ceiling of the plane's cabin.

Roy Tash Becomes Director

Roy Tash, veteran Canadian newsreel cameraman for past 25 years, is switching from cinematography to post of film director with Associated Screen News of Montreal. Douglas Skene assumes Tash's post in the newsreel division.

Plans for 16mm Society Disclosed

Aiming to correlate the efforts of professional 16 mm. cinematographers, producers, directors, writers, laboratory technicians, in addition to others associated with 16 mm. film production as amateurs or professionals, the United 16 mm. Society, Inc., has been formed in Hollywood. Organizing group, headed by Daniel B. Clark, A.S.C., who recently retired as executive director of the photographic department of 20th-Fox Studios includes Arthur Miller, A.S.C., two-time Academy Award winner; Clyde Devinna, A.S.C., globe trotting exterior expert in cinematography who also won one Academy Oscar; Jack Stanfield, Society Sixteen Cinematographers, and member of S.S.C.'s board of directors; and Alan Stensvold, S.S.C., who is recognized as one of the top professional 16 mm. cinematographers in the field.

Primary Purposes

In launching the 16 mm. organization, Clark states that his survey over a period of years dictates that the field required a central society which could provide the heretofore unavailable services and counsel on the technical, chemical, processing phases of 16 mm. films with the aim of uniformly improving the product. In fact, "to organize for the purpose of bringing together as a group all those who are engaged in the production of distribution of 16 mm. films."

Membership will be divided into two classes: professional, with financial gain as the major objective; and non-professional, where the latter desire informational and educational benefits.

After the organization has been perfected to embrace a representative membership nationally, it is expected to survey the production and distribution fields of 16 mm. with the long-range purpose of establishing or setting up a releasing organization (operated by and for members) for more efficient distribution returns on released product. Another major aim of the group is the coordination of standards between the taking of pictures and the laboratory processing.

Camera Equip. Co. Eastern Rep. for Micro-Engineering

Camera Equipment Company of 1600 Broadway, New York, has been appointed eastern representative for the products of Micro-Engineering Corporation of Hollywood. Deal was concluded during recent visit of CEC's Frank Zucker to the coast.

Micro is designing a number of accessories for the 16mm. professional, first piece of equipment introduced being a 16mm. film splicer.

Still Printing Film

Paul Findley, who served four years in the Army pictorial service—three spent in the European theatre—as a film printer, has joined the staff of Telefilm Studios, 16mm. organization in Hollywood. Findley admits his civilian job isn't a change—he's still a film printer.

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Aces of the Camera

(Continued from Page 240)

ment he also coordinated the operations of the Scenic Art, Process, Optical Printing, Insert, and Special Effects departments; thus streamlining all the camera work in the studio, eliminating duplication of effort, and imposing still further phototechnical consistency.

The Cine-Simplex Camera, of which Fox Studios are justly proud, developed after years of experiment by Grover Laube, Robert C. Stevens and the late Charles Miller, was perfected and put into production by Dan Clark. He also contributed the standardized coated lenses and the automatic slating and cueing device.

Winning one of the distinctive statuettes for each of its inventors as the outstanding Technical Achievement in the Motion Picture Industry for the year 1940, the Cine-Simplex camera has been extolled and explained in reams of copy that embraced the national news magazines as well as the photographic journals.

Proud of his profession, Dan believes that the cameraman is the most valuable man on production. And while it's quite possible that he may be a wee bit biased in his opinion, he backs that opinion with some pertinent facts. The actor, he says, has the director to guide him. And the director is advised by the producer. But there is no blueprint for the cameraman's work. He must make his own decisions and his work can only be evaluated after it has been done. Cameramen are so important to production, he adds, that they are virtually frozen insofar as advancing to status of director or producer.

Just because Dan Clark has retired from 20th Century-Fox don't think for one moment that he has given up his interest in cameras, in pioneering, or in helping people. His new venture is, "The United 16 mm. Society, Inc.," a non-profit organization appealing to both amateur and professional cameramen, writers, producers and distributors.

As a long established 16 mm. enthusiast in his own right, Dan introduced 16 mm. cameras and color film into Fox Studios for test purposes. Loud in his praise of the results obtained, he is enthusiastic about the prospects for the sub-standard film. Through the United 16 mm. Society he hopes "... to organize all those interested in the 16 mm. motion picture field on a national basis—for the purpose of bringing them together as a group so that those who are engaged in any phase of the production or distribution of 16 mm. films may benefit—their relationship to the industry be better understood and recognized. "... to so bring it about that membership in the Society shall be at once a mark of honor and distinction, based on merit.

"... to conduct studies, surveys and conferences in order to discover the groups, individuals or activities needing attention and to ... advance solutions to problems involved ... to act as an

agency on all problems confronting the members ... to provide a reference bureau and clearing house for members interested in the production and distribution of their films, for the interchange of ideas, information and data relative to the purposes of this Society ... to create, develop and maintain books, periodicals, papers, records, scripts, exhibits, recordings and films, charts and other graphic material—for the benefit of the members.

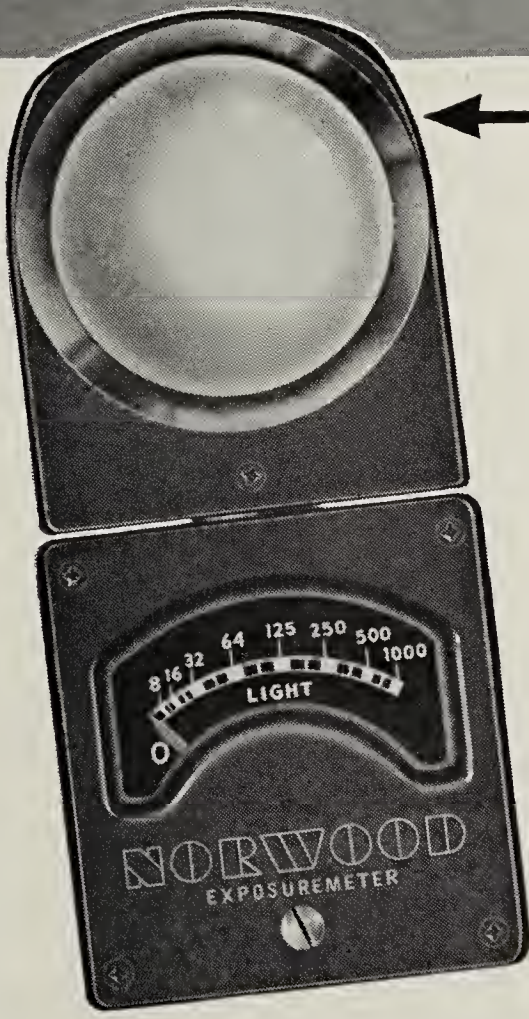
"... to give, promote, foster and encourage mutual aid among members ... to supervise, direct and provide in all reasonable ways—any and all such services to its members ... to furnish statis-

tics and unbiased facts to its members as to their individual rights and requirements ... "

The above quotes are from the bulletin put out by the United 16 mm. Society. Dan also hopes to use this Society to further forms of strict standardization in every phase of 16 mm. work and equipment. This is certainly a job that needs doing and one that will have to be done before the narrow gauge film comes completely into its own. It's a big job. But Dan Clark has the experience, the authority and the prestige to put it over. And you can add to that the best wishes of all his friends.

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(See Article on Page 254)

Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, assignments of A.S.C. members as Directors of Photography on current productions shooting in the various Hollywood studios are as follows:

Columbia Studios

Rudy Mate, "Down to Earth," (Technicolor), with Rita Hayworth, Larry Parks, Marc Platt, Edward Everett Horton and James Gleason.

Leo Tover, "Dead Reckoning," with Humphrey Bogart, Elizabeth Scott.

Charles Lawton, Jr. "The Return of Monte Cristo." (Edward Small Prod.) with Louis Hayward, Barbara Britton.

Henry Freulich, "The Gloved Hand," with Anita Louise, Robert Scott.

Phil Tannura, "The Outlaw Tamer," with Charles Starrett, Smiley Burnette, Nancy Saunders.

Hal Roach Prods.

John Boyle, "Here Comes Trouble," (Cinecolor), with William Tracy, Joe

Sawyer, Beverly Lloyd, Joan Woodbury, Betty Compson.

Independent Prods.

Benjamin Kline, "Rolling Home," (Screen Guild - Affiliated) with Jean Parker, Russel Hayden, Raymond Hatton.

Metro-Goldwyn-Mayer

Joseph Ruttenberg, "Sacred and Profane," with Green Garson, Richard Hart, Bob Mitchum.

Sidney Wagner, "High Barbee," with Van Johnson, June Allyson.

George Folsey, "The Secret Heart," with Claudette Colbert, Walter Pidgeon, June Allyson, Robert Sterling.

Ray June, "Beginning of the End," with Brian Donlevy, Robert Walker, Tom Drake, Audrey Totter, Beverly Tyler, Hurd Hatfield, Hume Cronyn, Joseph Calleia, Henry O'Neill.

Paul Vogel, "Lady in the Lake," with Robert Montgomery, Audrey Totter, Leon Ames.

Harry Stradling, "Sea of Grass," with Spencer Tracy, Katharine Hepburn, Melvyn Douglas, Robert Armstrong.

Charles Rosher, "Summer Holiday," (Technicolor), with Mickey Rooney, Gloria De Haven, Walter Huston, Frank Morgan, Marilyn Maxwell.

Monogram

L. W. O'Connell, "Bringing Up Father," with Joe Yule, Renie Riano, Tim Ryan.

Harry Neumann, "Wife Wanted," with Kay Francis, Robert Shayne, Paul Cavanaugh, Veda Ann Borg.

Paramount

George Barnes, "Emperor Waltz," (Technicolor), with Bing Crosby, Joan Fontaine, Oscar Karlweis, Sig Ruman.

Jack Greenhalgh, "Jungle Flight," (Pine-Thomas), with Robert Lowery, Ann Savage, Douglas Fowley, Barton McCane, Curt Bois.

RKO

Gregg Toland, "The Best Years of Our Lives," (Goldwyn Prod.), with Myrna Loy, Frederic March, Dana Andrews, Teresa Wright.

J. Roy Hunt, "The Devil Thumbs a Ride," with Lawrence Tierney, Nan Leslie.

Lee Garmes, "The Secret Life of Walter Mitty," (Goldwyn Prod.—Technicolor), with Danny Kaye, Virginia Mayo, Fay Bainter, Boris Karloff.

Joseph Walker, "It's a Wonderful Life," (Liberty Films) with James Stewart, Donna Reed, Lionel Barrymore, Thomas Mitchell.

Milton Krasner, "Katie For Congress," with Loretta Young, Joseph Cotten, Ethel Barrymore, Anna Q. Nilsson, Rose Hobart, Charles Bickford.

Frank Redman, "Beat the Band," with Fances Langford, Gene Krupa.

Republic

Archie Stout, "Angel and the Outlaw," with John Wayne, Irene Rich, Gail Russell, Bruce Cabot, Harry Carey.

20th Century-Fox

Arthur Miller, "The Razor's Edge," with Tyrone Power, Gene Tierney, John Payne, Anne Baxter, Herbert Marshall, Anne Revere, Clifton Webb.

Norbert Brodine, "13 Rue Madeleine," with James Cagney, Annabella, Frank Latimore, Richard Conte.

Joseph La Shelle, "The Late George Apley," with Ronald Colman, Peggy Cummins, Richard Ney, Edna Best.

United Artists

Russell Metty, "Bel Ami," (Loew-Lewin. Inc.), with George Sanders, Angela Lansbury, Ann Dvorak, Frances Dee, Marie Wilson.

Lucien Androit, "Dishonored Lady," (Mars Films) with Hedy Lamarr, Dennis O'Keefe, John Loder, William Lundigan.

Franz Planer, "The Chase," (Nero Prods.), with Robert Cummings, Michele Morgan, Peter Lorre, Jack Holt.

Paul Ivano, "Strange Bedfellows," (Andrew Stone Prods.), with Eddie Bracken, Priscilla Lane, Allen Jenkins, Tom Conway, Arthur Treacher.

Universal

Hal Mohr and W. Howard Greene, "Pirates of Monterey," (Technicolor), with Maria Montez, Rod Cameron, Philip Reed, Mikhail Rasumny, Gilbert Roland.

Stanley Cortez, "Smash-Up," (Walter Wanger Prod.), with Susan Hayward, Lee Bowman, Eddie Albert, Marsha Hunt, Wallace Ford.

Russel Harlan, "Ramrod," (Enterprise), with Joel McCrea, Veronica Lake, Donald Crisp, Preston Foster, Arleen Whelan.

Joseph Valentine, "Magnificent Doll," (Skirball-Manning Prod.), with Ginger Rogers, David Niven, Burgess Meredith, Peggy Wood.

Tony Gaudio, "Swell Guy," (Mark



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Hellinger Prod.), with Sonny Tufts, Ann Blyth, Ruth Warrick, William Gargan.

Charles Van Enger, "White Tie and Tails," with Dan Duryea, Ella Raines, William Bendix, John Miljan.

Virgil Miller, "Vigilantes Return," (Cinecolor), with Jon Hall, Margaret Lindsay, Andy Devine.

Warner Brothers

Arthur Edeson, "Stallion Road," with Ronald Regan, Zachary Scott, Alexis Smith.

Peeverell Marley and William V. Skall, "Life with Father" (Technicolor), with Irene Dunne, William Powell, Elizabeth Taylor, Edmund Gwenn, ZaSu Pitts.

Ernest Haller, "Deception," with Bette Davis, Paul Henreid, Claude Rains.

Carl Guthrie, "Cry Wolf," with Errol Flynn, Barbara Stanwyck, Geraldine Brooks.

Sid Hickox, "Possessed," with Joan Crawford, Van Heflin, Raymond Massey, Joan Chandler.

Bell & Howell Distributes Pierce Magnetic Wire Recorder

Bell & Howell has acquired distribution of the Pierce model 55A wire recorder and reproducer to add to B & H audio-visual service in the educational, industrial and religious fields of motion pictures. Pierce wire recorder provides 66 minutes of continuous recording.

Because neither wear or deformation of the wire occurs during recording or reproducing, the wire itself will last indefinitely. Previously-recorded sound is erased automatically when a new recording is made on the wire.

Central Cine Gets India Newsreel

Central Cine Corporation, Ltd. of Bombay has taken over production and distribution of Indian News Parade and information films from the government of India, according to recent announcement of A. J. Patel, executive director of Central Cine. Newsreel cameramen have already been assigned in various parts of the country to regularly supply film footage, and the company will maintain its own aircraft for speedy delivery of negative and prints. Cooperation with the government will be maintained in production of educational and documentary films, Patel stated.

Entertainment for A.S.C.

(Continued from Page 235)

who was dressed in the style befitting a cameraman. Bergen, well-informed on the technical terms of photography and equipment, proceeded to kid the cameramen and practices all over the place, including raw stock, cameras, laboratories, and lenses. For a brief encore, Bergen brought Mortimer Snerd on for a few comments and laughs.

To wind up the show, Carson, Morgan, Kelly and Kaye appeared to sing a comedy ditty on cameramen and their work to the tune of the quartette from "Rigoletto." For the musical portions of the program, Leo Forbstein of Warners conducted the Freddie Martin orchestra, with Martin taking over for the dance program which followed the show.

Ciné-Kodak News Is Back

Ciné-Kodak News, the informative and up-to-date amateur movie-making magazine which is automatically distributed without charge to all active home movie makers, has once again commenced publication, according to an announcement by the Eastman Kodak Company.

Reduced in size, but with more pages added and with the use of color considerably increased, the publication is bringing readers a "refresher course" in home movie making in its first postwar issue. Titled an "Introductory Issue," this first Ciné-Kodak News—1946 style—stresses the fundamentals of good movies, easy movies, movies that are fun to take and to show.

Future issues will be published as frequently as paper supplies permit, and will contain seasonal and instructive articles of interest to all movie makers. In addition, as in the past, the editors offer a free review and criticism service to all movie makers who want to improve their movie making.

C. H. Percy Promoted

Recently released from Navy duty after three years in the service, C. H. Percy has returned to Bell & Howell Company, Chicago. At recent annual meeting of stockholders, he was re-elected to the board of directors, and at the first meeting of the new board was promoted to the position of company secretary. Previously he had been assistant secretary of the company.

Filmosound Distributes British Educational Films

By special arrangement with British Instructional Films, Ltd., a large group of educational films is to be made available for rental and sale through the Bell & Howell Filmosound Library and its authorized representatives in the United States. Many of these films are not unknown to American schools, prints of some have been in use for years by educational film centers.

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Industry Salutes A.S.C.

(Continued from Page 233)

ica, we in the motion picture industry, should look forward with a great deal of hope, with encouragement that we have this vast power that we can use intelligibly for the future, with the knowledge and understanding that America is still the beacon light throughout the entire world; and with the understanding that the things that we have always stood for and have fought for in World War II, can be perpetuated.

Oh, I understand that there will be tough years ahead; there will be jungles of misunderstanding to be leveled; there will be swamps of doubt to be filled; there will be forests of fear to be cut. But it seems to me that we should approach this age with all of the enthusiasm of a young man eagerly embarking upon a new adventure. I think that the gains that can be secured are well worth the efforts involved and so let us in the motion picture industry ring out the lugubrious philosophies of sanctity and senility and maturity; and let's ring in the confidence and hope and good cheer that America and defeat have never been made to rhyme. I can tell you that I am very happy and very proud to be in the motion picture industry.

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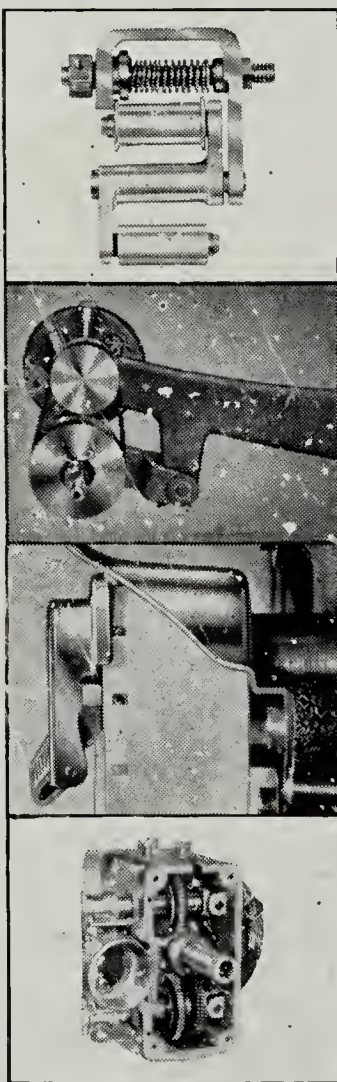
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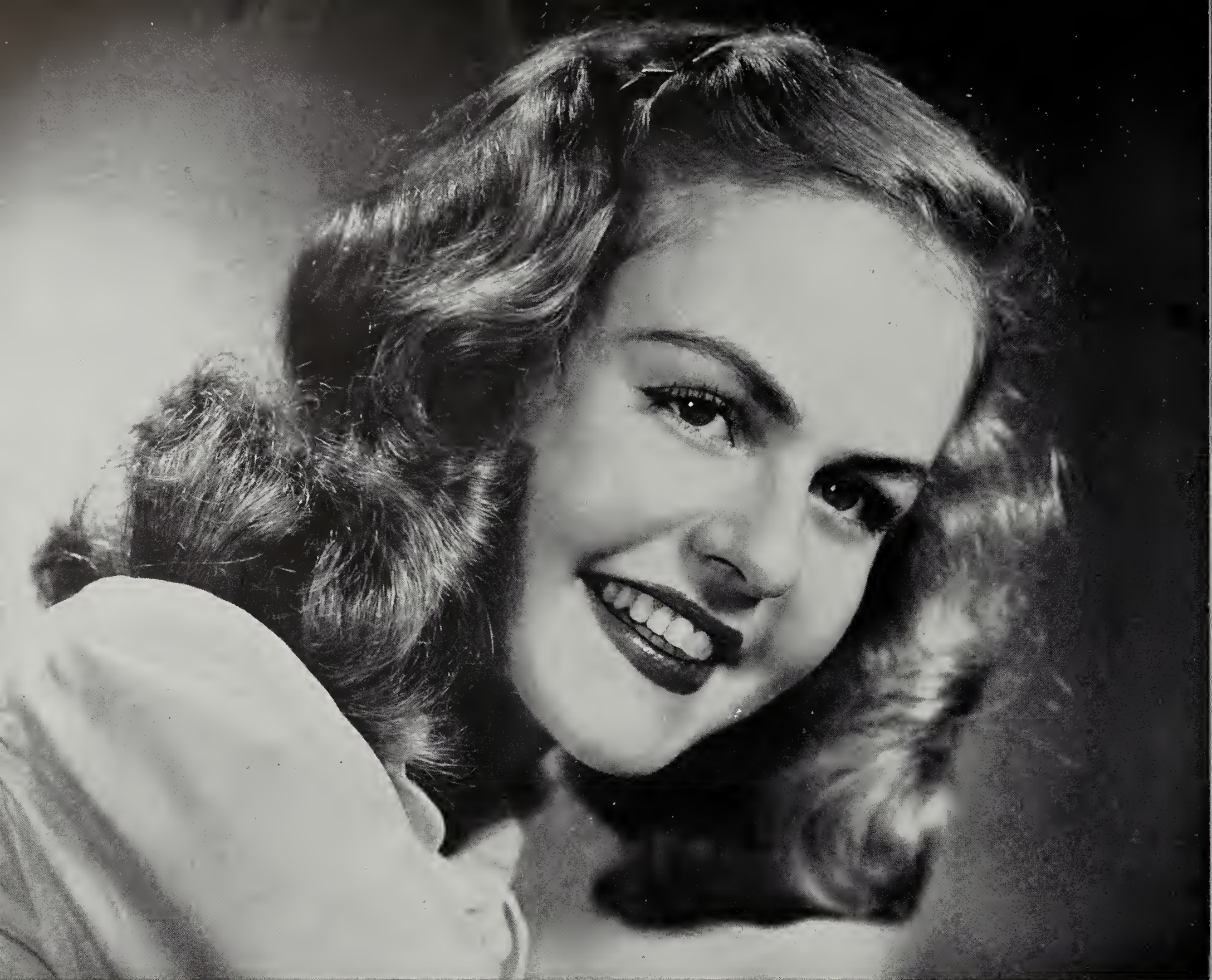
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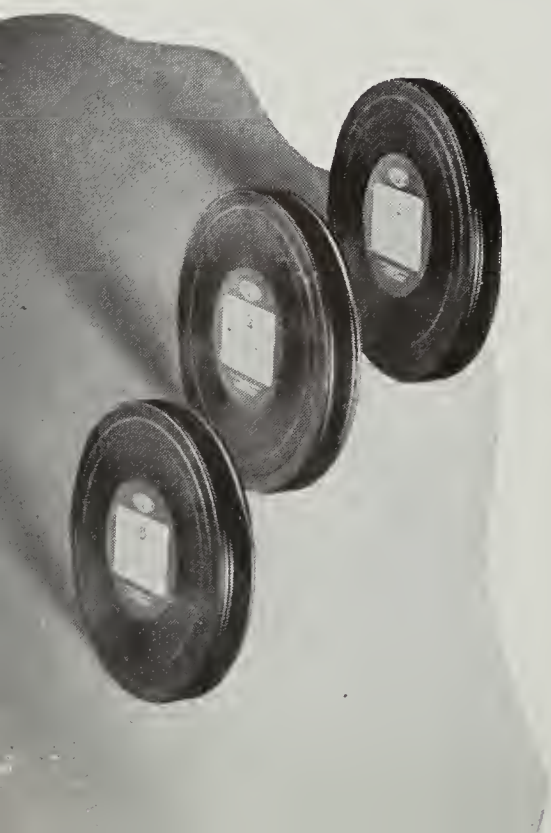
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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

AUGUST, 1946

NO. 8

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ON THE FRONT COVER William Powell and Irene Dunne, starring in the Warner Brothers production of "Life with Father," listen attentively while Director of Photography Peverell Marley, A.S.C., explains a camera setup. Technicolor Director of Photography William V. Skall, A.S.C. (left of Marley), also participates in the conference.



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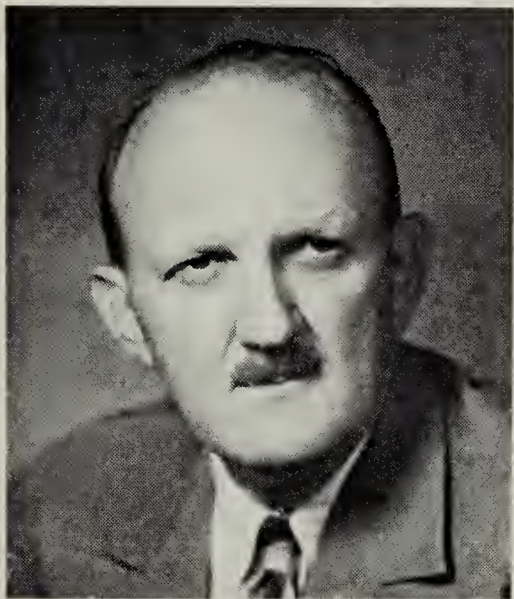
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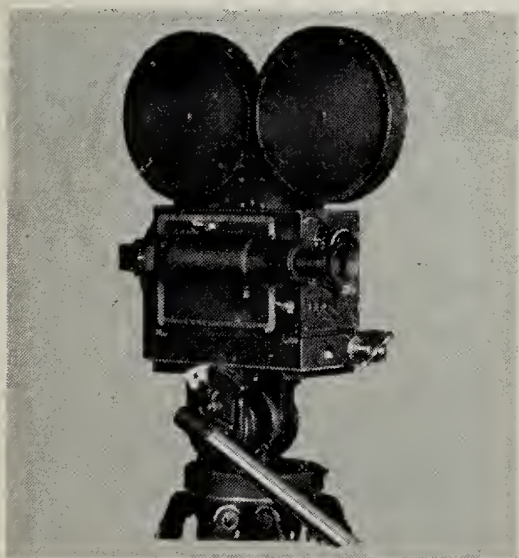
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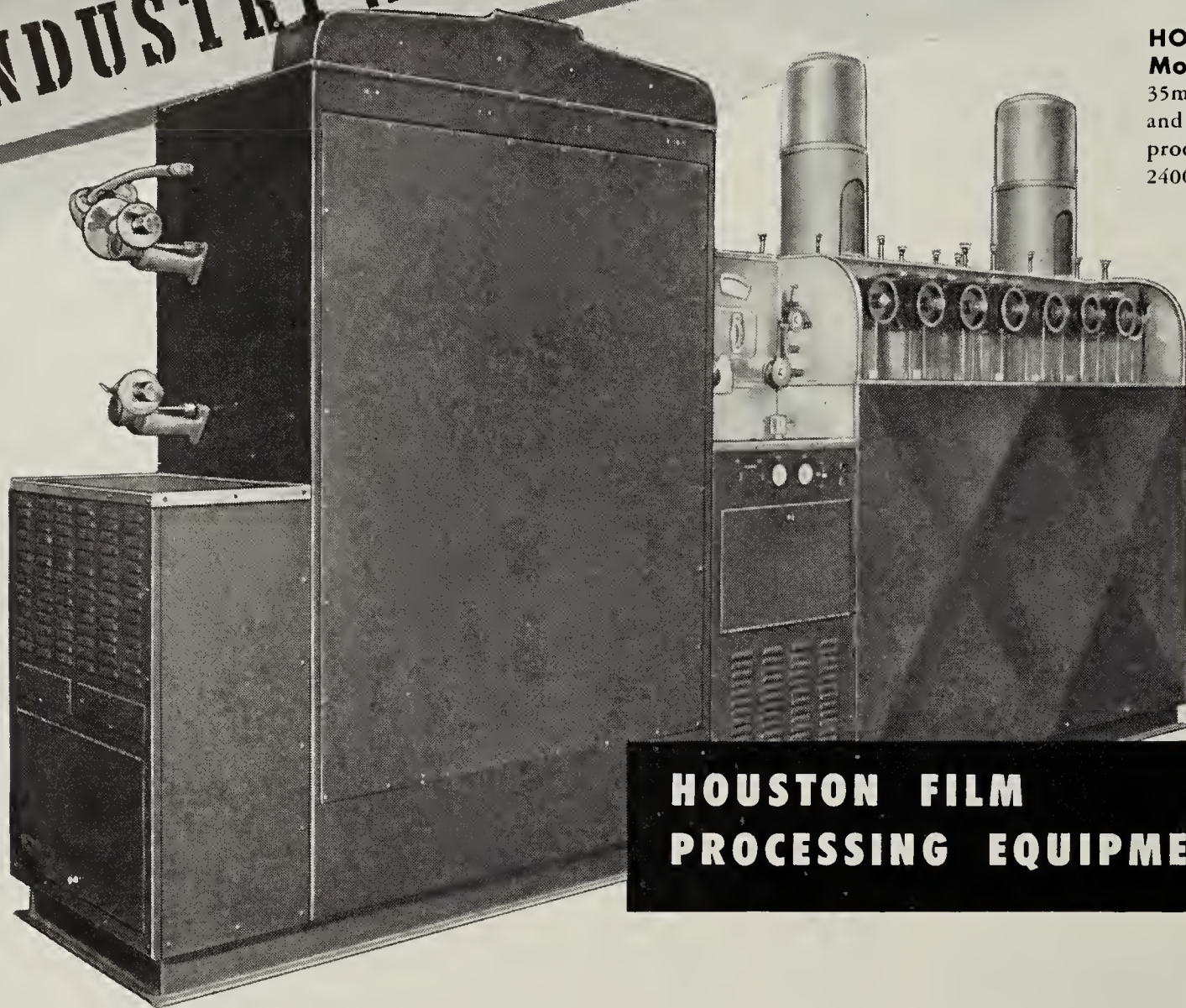
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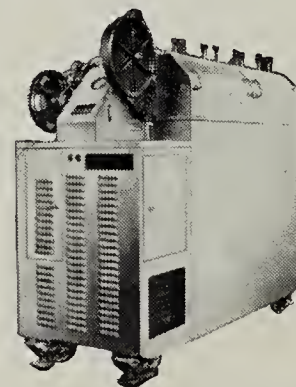
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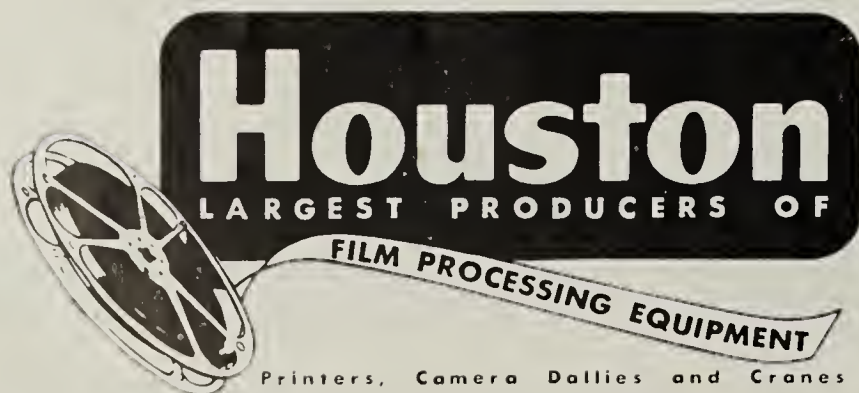
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ACES of the CAMERA

VINCENT J. FARRAR, A.S.C.

By W. G. C. BOSCO

IT MAY BE as apocryphal as a press agent's release, but the story is generally accepted that people who have only the vaguest idea of New York, Chicago or Washington or who have never heard of Anaheim, Azusa or Cucamonga, are all perfectly familiar with the most intimate goings-on in the Entertainment capital of the World, the Home of Motion Pictures—Hollywood.

So fast, in fact, has been the growth of the industry in Hollywood, so wide its influence, and so firmly entrenched

has it become in the minds of people generally, as THE place where movies are made that it comes as a shock sometimes to realize that there was a time when moving pictures were not made in Hollywood.

And the shock is even greater when that realization comes as a result of a conversation with a man as young as Vincent Farrar who talks with intimate memory of appearing in the early day Westerns that were filmed against the rugged, frontier atmosphere of his

father's land in Staten Island, New York.

Vince's memory is not sufficiently good to recall the names of any of those sagebrush sagas, nor the name of the company that, in 1910, was too busy making ends meet to think about the part it was playing in pioneering a new medium. But he remembers vividly renting his father's horses to the cause of cinematic art for the sum of fifty cents per day per horse. With his services, and those of his brother, thrown in for good measure.

Because the brothers Farrar could ride bareback they were given the job of being Indians. And sometimes the warpaint, with which movie Indians were always generously daubed in those days, would be difficult to remove except as it came off on the towels and sheets. And sometimes it seemed like a great deal of work with the horses after the excitement of the day was over. But fifty cents a day is a lot of money when you're ten years old.

Besides, there was a fascination and a certain glamor about movie making even in those days; and working in them set Vincent apart from his fellows. He could talk intimately about the secrets hidden inside the little black box, and hold his youthful friends spellbound as he talked about his experiences acting Indian in front of it. He told them it was the most wonderful business in the world to be in, and that he would always be in the business of making movies. They believed him. And perhaps he talked himself into it.

Vince continued to work for the movie companies throughout his schooldays. And although some of the jobs he did were, in the eyes of his schoolmates, lacking in the qualities of prestige that his earlier, Indian portraying job had, he was perfectly happy. Running for sandwiches for the men in the lab finally won him an entree into that sanctum, and a willingness to clean up the place and look after the racks and drums won him an initiation into the mysteries of the lab-man's craft. Eventually he was elevated to the title department, and at the age of seventeen was chosen by Billy Bitzer to be his assistant.

It was a most fortunate turn of events that put Vincent Farrar, the camera protégé, under the instruction of Bitzer, who, as cameraman for the great David Wark Griffith, had won and was then still winning new recognition for the screen. It was an apprenticeship rich in experience gained from a man who was constantly setting new standards for the art of cinematography and frequently introducing ideas that were years in advance of his contemporaries. It was a rich inheritance.

In D. W. Griffith's "Dream Street," starring Carole Dempster and Ralph Graves, fog, the bête noire of early day cameramen, was introduced on a set for the first time. To lend reality to the Limehouse sequence of the picture the fog, in the form of steam, was piped onto

(Continued on Page 294)

Evolution of the Camera in Sound-Film Production 1926 - 1946



One of the sound-proofed camera booths used from 1926 to 1929 which allowed no camera movement whatsoever, and tabbed "sweatboxes" by camera crews due to lack of ventilation.

IT seems but just a few years ago that Warner Brothers launched experiments and research aiming at the practical adaptation of sound for motion picture production. But those pioneering efforts 20 years ago instituted by a company which gambled its entire financial future and existence in the enterprise when the then larger major organizations ignored the potentialities of sound for films—resulted in quick and spectacular success; and revolutionized the industry to also radically change the entire technique of film production.

The past two decades have been the most sensational in the 50 odd years of history of the industry. And the artistic and technical progress of cinematography have been most important contributions to the rapid advance in general production quality of pictures now being released.

To an old-timer of the industry, memory goes back to the one reel days of 35 years ago, when camera setups were static—the lens faced the actors during scenes, and the players were forced to stay within chalk-marked sidelines. Early introduction of pan shots allowed for greater fluidity of the camera, and provided the cameraman with an opportunity of adding materially to the dramatic or comedic tempo of the picture. Such camera movement—through the ingenuity of the motion picture photographers who refused to be restricted in camera movement and soon had the cameras out of the original confining sound-proofed booths and under blimps or blankets to

again allow for widespread fluid movement.

McClay's Work for Warners

The grandpappy of the modern camera "blimp," the device which keeps the noise of the turning camera mechanism out of the finished motion picture, was a large rectangular box with an electric bell inside.

The box was invented and insulated for sound by Edward McClay, one of the many early-day technicians who labored to perfect the talking picture.

At the time that Warner Bros. were struggling to bring Vitaphone to perfection 20-odd years ago, McClay was the proprietor of a small manufacturing business in Los Angeles. His help in eliminating camera noise was not sought during the filming of the very earliest Vitaphone pictures.

When the first short subjects for Vitaphone were recorded, the camera was placed in a refrigerator-like box, one side of which consisted of double plate glass windows. The boxes were thick with insulation, air tight, and decidedly uncomfortable for the operating cameraman stationed inside.

It was realized early by Warner Bros. technicians that some better way of eliminating camera noise should be found. McClay, whose manufacturing company worked extensively with celluloid products, was consulted. He thought he could build a camera cover which would make it silent. To prove his contention, he built an oblong box of alternating materials and air spaces and in-

stalled an electric bell inside. This he brought to the studio for demonstration. When he rang the bell the noise of it was scarcely discernable even close by the box.

Believing McClay was on the right track, Warner Bros. commissioned him to build four camera covers and when these were delivered and tested, in 1929, he was offered a contract to work solely for the studio. His process was patented and McClay and his patents came to the Warner lot, where they have remained ever since.

According to the expert noise eliminator, his problems only commenced when he moved his workshop to the Warner camera department. As fast as the sound engineers improved the pickup of their microphones, he had to eliminate still more of the faintly audible camera noise. It was a race between sensitivity of the sound equipment and McClay's ingenuity. He has managed to keep a jump ahead for 15 years.

McClay looks forward to the day when his original patents will run out and he can retire to live in comfort on the money he has made by taking camera noises out of sound pictures. As high spots in his experiences he lists his accidental discovery of the German process of making a non-inflammable celluloid for his camera covers, and his first use of sponge rubber as a sound deadener inside the camera blimp.

Early Sound Production Experiences

It is interesting to record the reminiscences of veteran cinematographers who

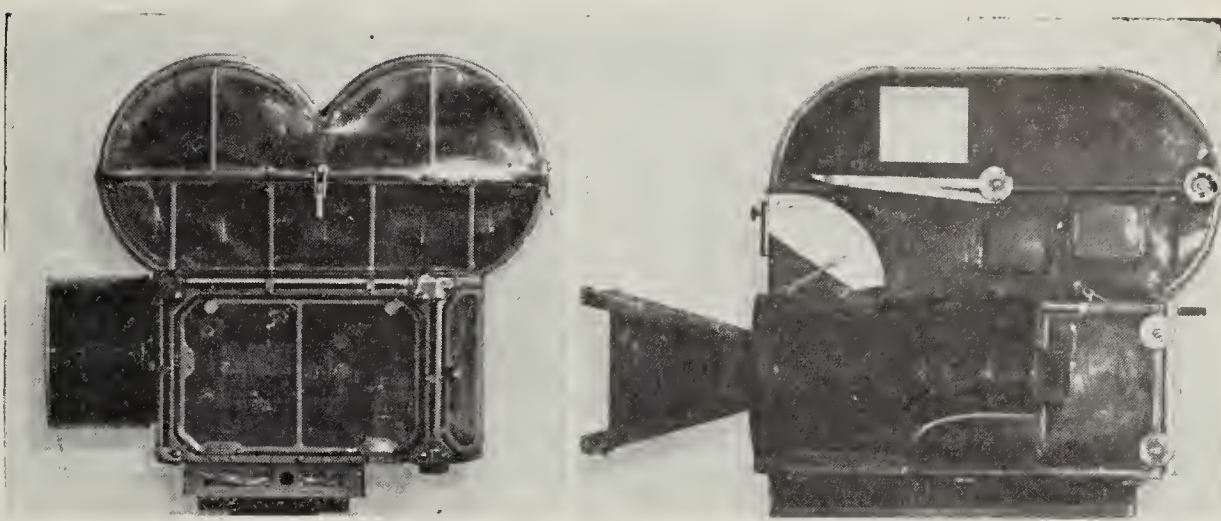
were associated with initial sound production activities. Arthur Edeson, A.S.C., whose motion picture photography dates back to the one reel era, recalls that Fox's "In Old Arizona" was the first exterior feature in which sound was actually recorded outside of the studio.

"Everyone told us it couldn't be done," said Edeson who photographed the production in 1929. "In the early days of talkies we were continually told that this or that could not be done because it would not record correctly. Those 'sound experts' all but collapsed when anyone mentioned recording sound on location.

"Edmund Hansen, originally head of the Fox sound department who recently retired, and myself decided there was no reason why it could not be accomplished. After all, Fox Movietone News was then being filmed and recorded outside of sound stages.

"So we packed our equipment and travelled south to San Juan Capistrano, spending three weeks making tests back of the Mission there, and doing all the things the sound 'experts' stated could not be done.

"I had an especially quiet camera; so it was never heard in the long shots. In the close shots, I quieted the motor with a padded quilt, but if that did not work I'd set up a big plate glass which separated the camera from the actors and the microphone. Although you could walk around it, the glass stopped the camera noise from drifting into the microphone.



Late in 1929, the first test sound blimp for a camera was devised (left) which brought the camera and crew out of the booth. Shortly after, initial permanent blimp (right) was perfected to cover the camera; with four walls, three air spaces, and sponge rubber lining, to deaden camera movement sound. Standard Mitchell camera was enclosed.

The tests proved we could photograph an outdoor picture in sound without difficulty." And the resultant picture was a smash hit.

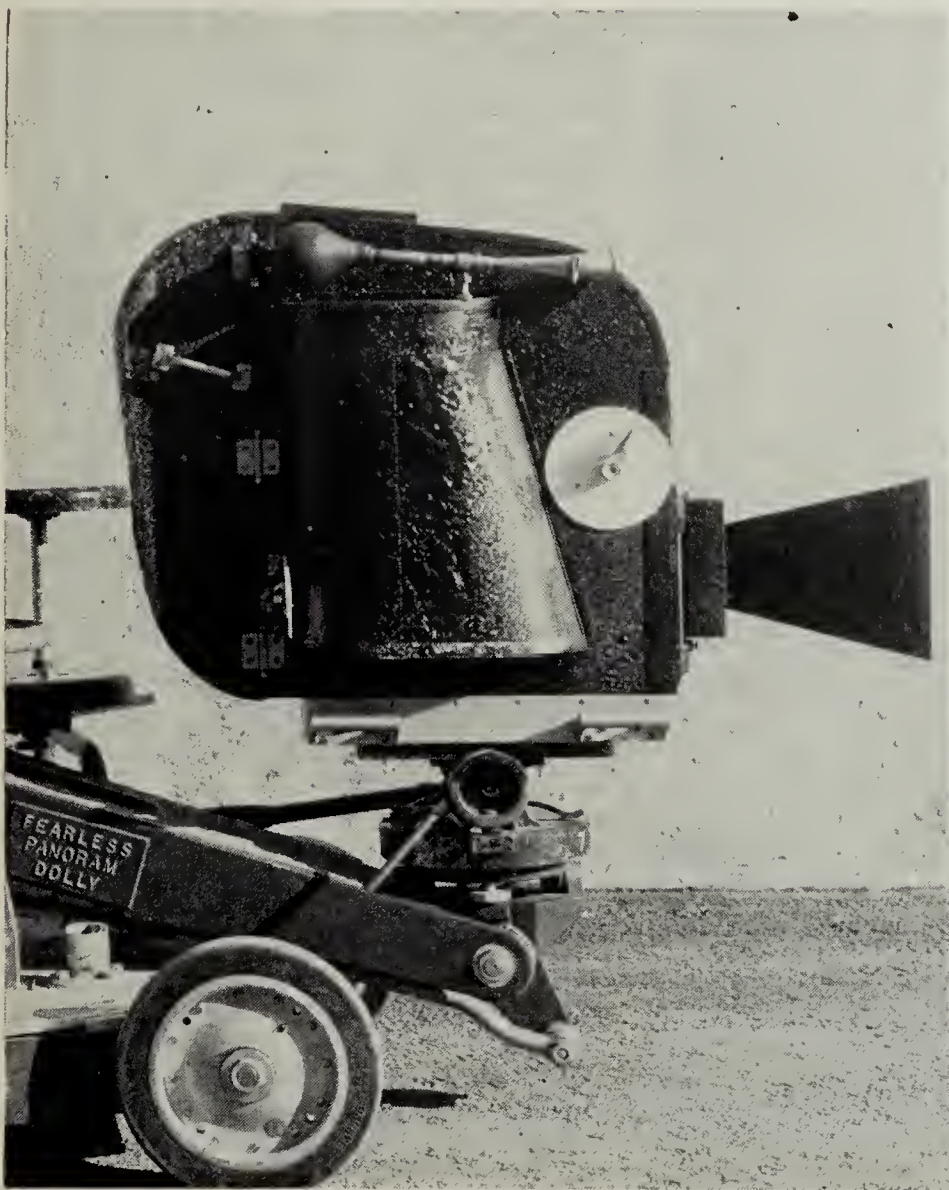
Marley's Camera Blimp

Pev Marley, A.S.C.—youngest Director of Photography in the industry 20 years ago shooting C. B. De Mille productions—was one of the first motion picture photographers to switch from the cumbersome and hot-box sound-proof camera booths to a blimp. De Mille, in directing "Dynamite" as his first talking production for Metro-Goldwyn-Mayer, required a pan shot for an important dramatic

scene. So Marley, who had been doing some testing on his own, moved in a camera blimp to accomplish the assignment and never went back into the camera booth.

"I'll never forget," said Marley, "the nervous hours we spent making that film. The biggest trouble in those early days was the lack of co-ordination between the mike and the cameraman. Mikes, not being as sensitive as they are today, were hung right down into the middle of a scene and were always dropping down into the frame line so that we were cutting off the actors at the nose."

Greatest difficulty in making the early



In 1934 a new covering (left) was found for the Mitchell camera, as sensitivity of sound recording required even more quieter camera. Back opening of blimp was more convenient than previous blimps. Then in 1937, the first BNC Mitchells (right) particularly quiet, replaced the cumbersome blimps, and are still being used on production.

The Cinema Workshop

2. THE SCRIPT

By CHARLES LORING

IN the last installment of *Cinema Workshop* we discussed the *Cinematic Idea* and pointed out that every worthwhile motion picture, no matter what its type or aim, is based upon the seed of an idea. After the *idea* has been selected and broadened out into a *theme*, a *script* is then constructed as a working plan for translating that idea into a motion picture.

The *script* is the film-maker's blueprint. It is a plan of action and dialogue, of camera angles and lighting—it should provide information from which every technician on the picture can plan the details of his particular contribution to the film. Time was when Hollywood di-

rectors could stage a whole feature without having one word of the story down on paper—but that era has long since passed. Today every entertainment film is scripted in the very finest detail before a camera is allowed to turn. But this technique is not exclusive to Hollywood. Every film—be it documentary, commercial, training film, or home movie—should be shot from a script. Aside from the saving of time, effort and expense, a well-planned script will mean a better-integrated film, one that “hangs together,” one that tells a tight, unified story without going off on tangents.

Much has been written on script-writing, but usually articles and books stress

the screenplay *form* rather than going behind the scenes to deal with the more-or-less abstract elements that go to make up a good script. It is these elements that we shall analyze in the following article, since, once they are mastered, the actual construction of the script is a relatively routine mechanical job. We shall deal with phases of script-preparation that are common to all types of filming.

What an Audience Expects

Films are made to satisfy an audience. No matter what the approach, or whether the aim is to inform or entertain—no film can really be successful unless it is accepted by an audience. Film audiences today are much more critical than they used to be. Consciously or subconsciously they have come to expect the motion picture to live up to certain standards of construction. If these standards are lacking, the audience will reject the film—even though they may not be able to tell you specifically what is wrong with it. Any film producer, before he plans a picture, should know what his audience expects.

First of all, a motion picture should put across a unified, dominant idea; it should tell some sort of story completely. Too many films are fragmentary, disorganized, lacking in coherence. They nibble at the edges of an idea rather than stating it boldly and following through to a definite conclusion.

Secondly, the motion picture is an *action* medium—therefore, it should be written and produced with the emphasis on action. Static scenes or sequences, too much dialogue or narration in place of visual action—these are the factors that slow down a film and defeat its purpose.

An audience also expects the idea to be presented with variety and force. It is not enough merely to place the facts upon the screen. The approach used must stimulate the audience's imagination with a variety of treatment, and at the same time forcefully present the subject matter.

An audience has a natural curiosity regarding the locale and the characters portrayed in the film. A well-written script will satisfy this curiosity by clearly establishing the locale, as well as presenting enough detail to clearly identify each character and his relationship to the story.

Many film-makers, attempting to plot a script for filming, feel that the story must be full of odd and unique situations. Actually it is well-nigh impossible to find a situation that is entirely original. An audience is more concerned with the freshness of the approach used in presenting the situation.

It is relatively easy to stimulate audience-interest in a worth-while theme, but the real task faced by the script-writer is to maintain that interest sequence-by-sequence throughout the entire film. The novice script-writer, regardless of the type of film he intends to write, can learn much about audience demands by studying the construction of the better Hollywood photoplays. The box-office thrives on favorable audience-reaction—



HIGH AND DIZZY! Jack Greenhalgh, A.S.C., all set to shoot a process background plate of the street below for a Pine-Thomas production to be released by Paramount.

therefore, these films have to please audiences in order to be successful.

Evolving the Script

A good script does not "just grow." Rather, it evolves through a series of steps from the original idea to the actual diagram for production which we call the *shooting script*.

Perhaps in the simplest form of filming: the home movie, all of these steps are not necessary. But in every other kind of picture, whether it be documentary or feature production, the writer will find that he can produce a much better script if he follows a definite plan in preparation.

Let us say that the idea for the film has been established. The next step is to sketch briefly the outline of the story that is to be built around the idea. This is called the *synopsis*, and it may take the form either of a plot outline or a short prose summary of the story. The important thing to remember about the *synopsis* is that it treats only the basic plot of the film; it does not deal with cinematic approach or production technicalities. The *synopsis* is the stage at which the story is organized and revised until it is correct in terms of what the film-maker wants to say in his picture.

After the *synopsis* is approved and the story values have been set, the writer can then take the story and write in the broader, more-detailed form that we call the *treatment*. This is a more-or-less full exposition of the story, written in narrative form and including essential action and dialogue (in content, if not in final form). In addition, the *treatment* gives general suggestions as to the cinematic approach to be used in interpreting various parts of the story. It suggests the scope of the film, the amount of production-value involved, and various technical devices that will aid in putting the story across.

When the *treatment* is completed it should be studied by all the technicians involved in the production, who can then get together in story conference to discuss the film, make any necessary revisions, and decide whether the picture as presented in the *treatment* can be shot with the facilities at hand. If not, suitable revisions can be made.

Once approved, the *treatment* can then be broken down into *scenario* form (also called *screenplay*, *continuity*, or *shooting script*). The *scenario* is a highly detailed description in technical language of the film that is to be shot. It is an elaborated breakdown of the *treatment* into actual scenes and sequences, with action and dialogue clearly defined. It supplies a good deal of information for the technicians regarding camera set-ups, locale of scenes, costumes, set decorations, lighting, etc. Moreover, the *scenario* points up the action, elaborates on the characters, includes little bits of "business," and suggests variations in pace and tempo. In short, the *scenario* is the detailed blueprint of the film to be shot.

Continuity

We next come to the subject *continuity*. The term itself is something rather vague even to people who have been



CLOSE SHOT. Sol Polito, A.S.C., crouched behind camera makes final check preparatory to shooting a scene with Gary Cooper and Vladimir Sokoloff in "Cloak and Dagger," United States Picture for Warners directed by Fritz Lang.

making films for years. Actually, *continuity* is nothing more than the inter-relationship of separate scenes and sequences blending together to form a unified cinematic pattern. If a screen story "hangs together" well and proceeds smoothly from one phase to another without abrupt breaks in connection or meaning, we say that it has smooth *continuity*.

In simpler form, the term means that a good script has a beginning, middle, and end—each a separate phase of the story, but one leading logically into the other with a strong sense of connection binding them together. This result can only be achieved by careful pre-planning. The dramatic or story elements involved should be organized in a logical pattern so that they tie-in smoothly together. The script is the place where *continuity* should originate; contrary to popular belief it cannot be manufactured in the cutting room.

In breaking down our *treatment* into *scenario* form, the first step is to divide the action into *sequences*. A *sequence* is

a series of *scenes* which, when joined together consecutively, put across a unified idea or phase of action. Most stories logically divide themselves into separate *sequences*. A study of the *treatment* will reveal where one phase of the story ends and the next begins. For simple comparison you might say that a *sequence* in a *screenplay* is like a chapter in a novel.

If the various *sequences* are thought of as separate units, it will be easier for the screen-writer to break down the script. Taking one sequence at a time, he then divides it into individual *scenes* or *shots*. Each of these *scenes* is, in turn, a unit within itself—but its pattern and meaning are dependent upon the other *scenes* that precede and follow it, as well as upon the overall approach of the script. Unless this relationship is recognized and carefully integrated, the script will almost surely lack *continuity*.

Elements of Dramatic Construction

We have said that a good script must have a beginning, a middle, and an end.

(Continued on Page 292)

Motion Pictures Sensationally Record "Operations Crossroads"

WHEN the atomic bombs cut loose last month at Bikini Atoll, the blasts and their after-effects rated the most inclusive and most completely thought-out aerial motion picture coverage ever attempted. Out of the unprecedented total of 251 airborne movie cameras scheduled for use by the Army Air Forces on this occasion, 159 were Bell & Howell 35mm. Eyemos and 16mm. Filmos; in addition to a number of Eastman type III highspeed cameras.

Although Operation Crossroads was a joint Army-Navy project, and Navy aerial photography will play an important part (in the form of four F6F photo aircraft and two torpedo bomber sections equipped for picture-taking), this release is confined to mention of the mission scheduled by the Army Air Forces.

Some idea of the scope of AAF coverage in motion pictures is afforded by a listing of the number of planes assigned to this phase of the experiment. Operating out of Kwajalein, two 4-plane flights of F-13's (B-29 Superfortresses equipped for photographic work) photographed the daddy of all experiments before, during, and after the dropping of history's fourth atomic bomb. Each F-13 was completely filled with precision photo-

graphic equipment as barely to accommodate the operators.

Flight "A" filmed the target and the area above it, flying at approximately 27,000 feet about 15 nautical miles from the target. Flight "B" effected similar coverage at about 27,000 feet, but with a different orbit and heading, and in addition served as a replacement pool. If any F-13 of Flight "A" is forced to drop out of position, an identically-equipped plane from Flight "B" slipped directly into Flight "A's" pattern and took over. Also operating out of Kwajalein were two big C-54's, equipped just as elaborately for cinematography as the Superforts already mentioned.

Spring-Driven "Spares" in Readiness

In addition to the total of 72 flexibly-mounted, motor-driven 16mm. and 35mm. Bell & Howell cameras on these ten planes, each cameraman had within easy reach a "spare" in the form of a spring-driven 35mm. Eyemo. Also, two of the five camera stations in each F-13 were manned by experts who were there for the purpose of filming the blast with hand-held Eyemo cameras. Thus, with both motor-drive and spring-drive at

hand, the Army Air Forces took no chances on power failure.

The war-famous G.S.A.P. gun cameras were mounted at vantage points on these planes, to act as robots. Furthermore, nine additional motion-picture cameras were mounted in each F-13, and aimed in unison by means of the G-E aerial gunsight, the optical sighting units for which were designed and made during the war by Bell & Howell Company. Having rendered the Superforts' guns so deadly in combat, these sights were virtually tailor-made for this particular purpose.

Inasmuch as all planes except the "drones" flew well beyond the radioactive power of the atomic energy released, no protection for their cameras and film was considered necessary. But the radio-controlled B-17 drones are another matter. Based on Eniwetok, all four of the drones and two of their six mother ships were completely equipped for cinematography. The drones kept in the vicinity of the lethal radioactive area following the blast, and later were sent by their mother ships right into the atomic "cloud" itself, in an attempt to gather data of many kinds. Accordingly, all cameras in the drones were incased in lead to protect the film from radio-activity, and exposures were controlled automatically. In addition to controlling the flight of the drones, two of the B-17 mother ships made a photographic record of what happened to the six robot "children."

How Drone Cameras Were Aimed

What about keeping the drone cameras aimed right on target? Anyone who has flown at all knows only too well that air currents aloft can cause a plane to change bearing unexpectedly, to bounce up and down, and how a pilot must cope with "roll, pitch, and yaw" in maintaining his course. Again, anyone who has ever looked into a camera viewfinder can understand how difficult it would be to keep his subject in his picture if he were suddenly to be moved up or tilted sideways. Using telephoto lenses, with the target miles away, the problem is even worse, and it had to be taken into serious account in planning photography from the drone B-17's.

Hence each drone was equipped with a television nose, from which signals were sent to a television set on the mother ship. A technician in the mother ship scans his television screen and sees thereon exactly what would be seen at the same instant from the cockpit of the drone miles away, near the target. Thus, by radio control he not only can "trim ship" on the drone to keep it in the air and on its course, but he also can keep its fixed-position movie cameras trained right on the target! Furthermore, this operator on the mother ship can start and stop the drone's cameras at will. Aboard each drone, dutifully obeying these radio calls for "Camera!" will be one Eyemo and two Filmo cameras, "getting what the operator sees" by television.



GOOD MORNING! Loretta Young, star of the Hal Wallis production for Paramount, "The Perfect Marriage," gives a cherry greeting to Director of Photography Russell Metty, A.S.C. as she reports on the set for scenes in the picture.

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Soviet Film Scenarios

By Dmitri Eremin

(Director, Scenario Studio, All-Union Cinema Committee.)

(Editor's Note: This article on a phase of the Soviet film industry is an official government-approved release radioed from Moscow. Because of inability in impartial reports on the status and progress of the Soviet film industry at this time, we are publishing this article which gives information on the current film production progress in Russia; particularly on the type of features made and in preparation.)

Noted for their good humor and expressiveness, the Russian people appreciate clever entertainment, but they want something deeper. They do not fall for superficial beauty, neither do they seek escape from real life in a world of imaginary joys. Overall, the Russians have a practical and active approach to reality.

Perhaps for this reason, the principal demand made on the scenario writer is that his script be full of meaning and the truth of life. And if we look back at the pictures that scored the greatest success with Soviet audiences, we see that they fully answer these two demands. In scripts of such films as "Chapayev," "Battleship Potemkin," "Deputy of the Baltic," "Youth of Maxim," "The Great Citizen," "Mother," "Lenin in October," "Lenin in 1918," and many others—Soviet spectators obtain a well-rounded appraisal of the recent history of his native land, and in the heroes he recognized the principal traits of the Russian character.

And it is namely these scenarios and films that determined the development of Soviet cinematography previous to the war against Facist Germany. In these pictures, both the scenario writer and producer endeavored to tackle the moral and social problems, and to give a truthful portrayal of characters in simple, yet monumental, form.

When the war broke out, the scenario writer was faced with a direct and urgent task: to help the people in the struggle against the enemy and to rally the spiritual powers of workers, peasants, and intelligentsia to overcome the wartime difficulties and respond to current nationwide problems. Thus came into being such scenarios as "District Committee Secretary" by I. Prut, directed by Pyriev; I. Bondin's "She Defends Her Country," directed by Ermler; K. Simonov's "In Name of Country," directed by Pudovkin; Eremin Gabrilovich's "Two Fighters," directed by Lukov; G. Mdivani's "Moscow Sky," directed by Raizman; and later L. Arnshtam's "Zoya," Donskio's "Rainbow," S. Gerasimov's "Mainland," M. Romm's "Number 217," and many others.

During the first years of the war,

scenario writers avoided generalizations and concentrated on the production of particular instances and situations that appeared typical during definite stages of the war. Here the scenario writer came face to face with the gruesome and brutal methods employed by the Germans in the war, and could not help but reflect them in his war picture scripts. At the same time he endeavored to bring in characters and situations that would definitely show at what cost the Russians were fighting the Nazis.

The final stages of the war and the ushering in of peace, found the Soviet scenario writers returning to the principles of work that are typical of the Soviet cinema—profound artistic generalization and the tackling of the great problems of life.

Of particular interest in this respect are the latest scenarios of such well-known writers and producers as Chirskov, Romm, Gabrilovich, Mdivani, Grebner, Pavlenko, Simonov, Bleiman, Gerasimov, Kozintsev, Trauberg, and others.

Some time ago, Friedrich Ermler produced "Turn of the Tide" from script by Chirskov—a clever and penetrating author well known for his scripts of "Chkalov," "Invasion," and other pictures. Task he set for himself in "Turn of the Tide" was to give a deep monumental dramatization of the strategy of the Soviet command in the battle for Stalingrad. The story is built around the efforts of an army general to turn the tide of war at that spot. He succeeds in doing so by routing and surrounding the troops of several German field marshals. It is a powerful picture and we hope that our American friends will see it on their theatre screens.

Somewhat of a different style is the scenario written by G. Kozintsev and L. Traubert titled "Simplefolk." This is a stirring story with good plot about the people of a Leningrad factory who were moved to Central Asia in the early days of the Nazi offensive. In this film, there's much of what is termed heroics of the homefront and much touching human warmth. It also brings to the screen one of the most important chapters in the history of the Soviet Union. Here, heroics of the homefront as depicted not in a sense of particular but as general manifestation of the national character of the Soviet people and their deep patriotic consciousness. Herein lies an affinity between "Simplefolk" and "Turn of the Tide."

On the same plane is Pavlenko's scenario for "Oath," now being produced by M. Chiaureli, eminent Georgian director. In relationships between a group of characters—from youth to maturity—the author shows the path of Soviet

Russia from the reconstruction period of 1918-1922 to 1940-1944. This is a most serious endeavor for what is expected to be an important picture.

Of considerable interest also are scenarios for "New Yugoslavia" by G. Mdivani, and "Eagle's Nest," by Dolidze—both devoted to the war of liberation of the Yugoslav people.

Variety in both plot and subject matter is the keynote of the new post-war Soviet scenarios. Soviet writers resumed work along lines which best expressed their leanings. Some of the new scenarios are worthwhile in mentioning—"Life in Blossom," by A. Dovzhenko; "Biography of Michurin, Great Russian Horticulturist"; "Song of Varyag," by G. Grebner, a drama of Russian sailors in the Russo-Jap war of 1904; E. Gabrilovich's "Our Heart," dealing with adventures of Soviet pilots; and N. Asanov's "Diamonds," based on life of geologist who discovers diamonds in the Ural Mountains. Of importance also are a number of historical and biographical scenarios dedicated to great generals, scientists and statesmen of USSR, in addition to screen versions of Russian classics by Lermontov, Ostrovsky, Gorky, Chekhov, and others.

Notable efforts are being made in the field of comedy. This is particularly true of G. Alexandrov's eccentric comedy, "Spring"; I. Savchenko's screening of old-fashioned vaudeville in "Dowry with Monograms"; "Lev Sinichkin," comedy by N. Erdman and M. Volpin; E. Pomeschikov's pair of new comedies, "Ivan" and "Maria"—both dealing with reconstruction in a Belo-Russian village; and "Your Far-Away Bride," which deals with the return of Turkmenian Red Army soldiers and their friendships. Also of interest are the comedy scenarios of S. Polotsky and D. Tarasov titled "Fascinated Sergeant," which deals with return of a girl from the front to her native village in Kazakhstan; "First Glove," a boxing story by A. Filimonov; "Arrow," by E. Pomeschikov and B. Laskin; and "Sober Wine," E. Mintz' tale of a girl who invented a new non-alcoholic wine while working in a distillery.

However, the current comedy feature which promises to be particularly interesting is "Railroad," by M. Romm and K. Mintz. Action of this comedy which tells a story of love and loyalty, is laid in the 19th, 20th and 21st centuries. Half of the film pictures the 21st century with its fantastic techniques—but the main portion of action is laid in the present. This scenario is dynamic and packed with plenty of humorous situations.

The Soviet scenario writer works for a most exacting public which demands genuine art in its cinema entertainment and not just sheer entertainment.

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IT WAS just twenty years ago this month that the motion picture found its voice—for it was on August 6, 1926, that Warner Bros. released "Don Juan," starring John Barrymore, the first completely scored sound motion picture. Less than a year later the "Jazz Singer," starring Al Jolson, drew huge crowds to the box office and sent the nation's film exhibitors scurrying to install sound projection equipment.

At first sound films were considered a novelty, something pessimistic prophets said couldn't possibly last, but in the scant two decades that have elapsed since the first life-cries of the cinema squalled forth, sound has become an integral element of motion picture making. Sound and the visual image have been welded together as firmly in an artistic way as they are blended physically when printed side-by-side on the same strip of film.

It is anti-climactic to say that sound-on-film is here to stay. That fact was evident from the moment the "Jazz Singer" opened his mouth. But it is only in the past several years that creative sound as applied to the visual image has come to be regarded as a complete and potent medium within itself.

In the early days of sound production, directors considered themselves lucky if they were able to record just the synchronized dialogue of the players, with perhaps an occasional sound effect thrown in for good measure. There was no attempt to use sound artistically or for psychological effect. Its sole function at that time was to replace the spoken sub-title and to enable the audi-

ence to actually hear what the players were saying. Now it is a recognized fact that aside from the actual presentation of dialogue, sound contributes many nuances of thought, action, and emotion that could not be effectively portrayed by the visual image alone.

In addition, sound correctly applied adds emphasis to a dramatic sequence, sharpening its effect on the audience and enhancing the emotional experience of "living" the story with the actors. In this way sound complements the visual pattern, plays along with it, adds to it. There are also instances when it achieves its force by deliberate contrast.

In terms of drama, sound has brought greater realism to the screen. The sharply overplayed gestures that characterized acting in the silent film are no longer necessary. For the actor, the entire responsibility no longer lies in portraying character by visual action alone. Nor, as in the case of the stage actor, must he

rely principally upon his voice for characterization. In the sound motion picture there is a normal balance between the two. The actor is allowed a greater amount of naturalness; he can effectively underplay a scene knowing that the sound camera will faithfully record the subtle shadings of expression in both his voice and his actions.

Just as sound and proper background music can point up tragedy or melodrama, so, too, it can heighten the rollicking effect of comedy. It is an effective tool in conveying the full meaning of the story to be told.

In the Beginning

It was inevitable that sound should come into its own. The silent picture, in spite of all the nostalgia it evokes, was an incomplete and rather unnatural medium. Purists and cinema highbrows like to maintain that the silent picture was the quintessence of Art, but when these same films are shown today they are, for the most part, laughable because of the exaggerated gestures, stilted dialogue sub-titles, and generally makeshift technique employed. Even when the silent film, because of its novelty, was popular, the absence of sound was evident.

Producers of that era tried to get around the obvious lack of the aural element by suggesting sound in the pictures that appeared on the screen. They had their players actually speak lines before the printed dialogue was flashed on the screen. They tried to use shots that would stimulate sound imagery, such as waves crashing against rocks, babies crying, etc.—but even these fell short.

From the audience standpoint, it was not especially pleasant to sit in a silent theater with only the coughing, sneezing, and belching of one's fellow spectators to underscore the picture. Exhibitors, realizing this, began to present some form of music as accompaniment to the film. Either a piano was used, or an organ, or in some cases a full orchestra playing an especially composed background musical score.

Acoustical engineers and recording experts, well aware that some form of direct sound was needed, set to work on the problem. Five years of intensive technical research elapsed before "Don Juan" made its vociferous appearance on the screen. But revolutionary as that

Sound and the Visual Image

By **HERB A. LIGHTMAN**



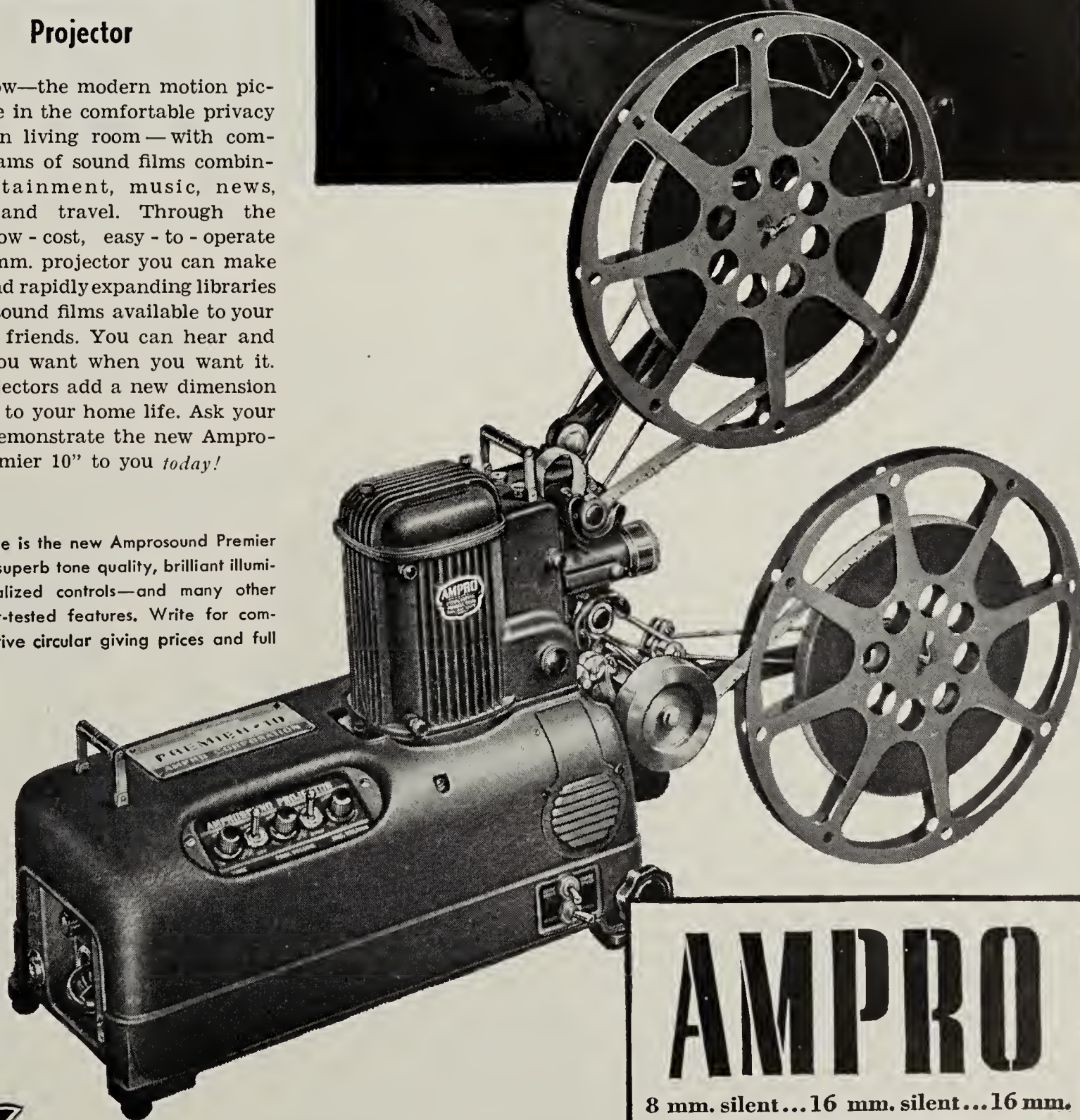
High above the recording stage, in a sound-proof cubicle, a sound engineer twirls the dials of his mixing console, blending the various channels of sound into a master track. Following the musical score in front of him, he is able to give the proper sound emphasis to the recording of the orchestra below.

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A scene from "Don Juan", the first fully synchronized and recorded sound feature, released by Warner Bros. August 6, 1926 at the Warner Theatre in New York. Charles Butterworth and John Barrymore are shown in the roles they portrayed. Overhead can be seen one of the very first models of recording microphones.



On the set of Warner Bros.' "Life With Father", director Michael Curtiz and star Irene Dunne prepare for a "take" as the sound recordist tests the voice level. Overhead can be seen one of the latest type dynamic microphones.

picture was, it was only the beginning of a long, painstaking effort to perfect the sound medium.

The first days of the talking picture were fraught with technical headaches. First of all, the early microphones were so sensitive that they could not be moved easily. This meant that the actors had to stay rooted in one place as they spoke their lines, which in turn resulted in some very stilted performances on the screen. Then, too, the diaphragms used in these microphones absorbed moisture readily and had to be dehydrated after every few takes, causing a great loss of time on the set. The first sound was recorded on wax discs which had to be sent to San Francisco for processing, and delays in shipment often meant costly hold-ups in production.

Synchronous re-recording had not yet been developed, which meant that dialogue, music and sound effects had to all be recorded at the same time. Nor had pre-scoring yet been adopted as a standard technique for recording musical numbers. In a musical routine, filming and scoring were done at the same time and a cut could be made only at a natural pause in the music. At best the effect was rough and uneven.

It was later, when sound-on-film was developed, that the talking picture assumed a real permanency. For in this process sound and the visual image became fused together on the same piece of film, and once synchronized, remained in perfect register.

Sound-on-film not only solved the phy-

sical problem of applying sound to the picture, but stimulated advancement in other technical phases of motion picture production as well. Since it was now necessary for the film to be projected at 24 frames per second instead of 16 in order for the sound to seem natural, faster emulsions had to be developed. Also, sound-on-film necessitated finer grain to preserve the fidelity of the recording.

Following in close order came advances in film processing and laboratory procedure. Set designing underwent revolutionary changes as designers found that they now had to consider acoustics and space for microphone booms. Camera movement, too, became more fluid as microphones were developed that could be readily moved about the set.

Perhaps one of the most significant changes took place in the field of set-lighting. The hot, harsh arc lights that had been used almost exclusively for illumination had to be discarded because the spluttering and crackling of the carbons interfered with sound recording. Instead, the incandescent lamp was developed to a high degree and resulted in illumination that was silent and of a better quality photographically.

The Technical Scope of Sound

Technically, the science of motion picture sound has reached the point where it can achieve any desired dramatic quality. Modern devices can either improve dialogue or distort it for special effect. Dialogue recorded in a straightforward manner can be re-recorded to simulate speech over the radio or tele-

phone. Run through a reverberation chamber it can give the illusion of words spoken in a cave, a large hall, or a rock-hewn canyon.

The pitch of a voice can be raised or lowered by speeding up or slowing down the sound track in re-recording. Occasionally sound tracks have been run backwards in order to provide unusual sound patterns for special effect.

With sound-on-film recording, unwanted sounds can be eliminated by snipping them out of the track, whereas desired sounds can be added by splicing them in. It is now standard procedure to record the music, dialogue, and sound effects of a scene each on its separate track—later blending all three into a properly balanced master track by re-recording. For instance, in a scene with a night club locale, only the dialogue of the principal players would be recorded at the time the scene was shot. The background noises, such as the chatter of the crowd, rattling of silverware, etc., would be added later, as would the mood music underscoring the scene.

At first there was a tendency to over-use background sound effects. For instance, in a night exterior scene, one would hear crickets chirping, birds calling, wind howling, dogs barking, branches rattling, and perhaps the distant drip of somebody's faucet. The total effect was very much like the rehearsal of a kiddies' orchestra.

In real life, our auditory senses do not sort and analyze every background noise

(Continued on Page 296)

Whatever the action

follow shot

pullback shot

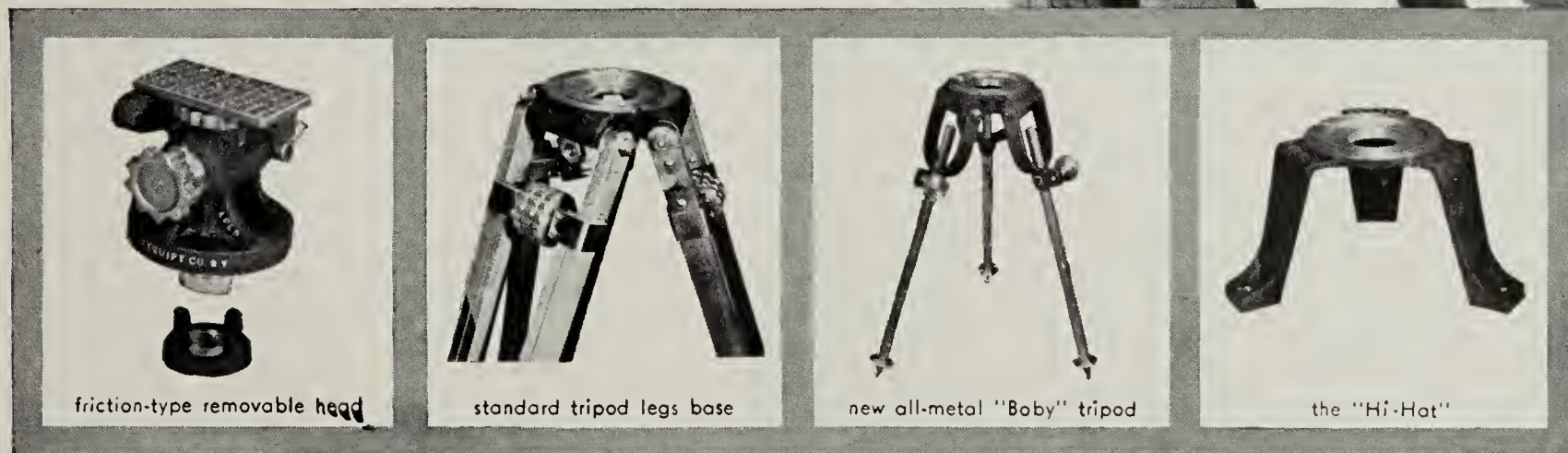
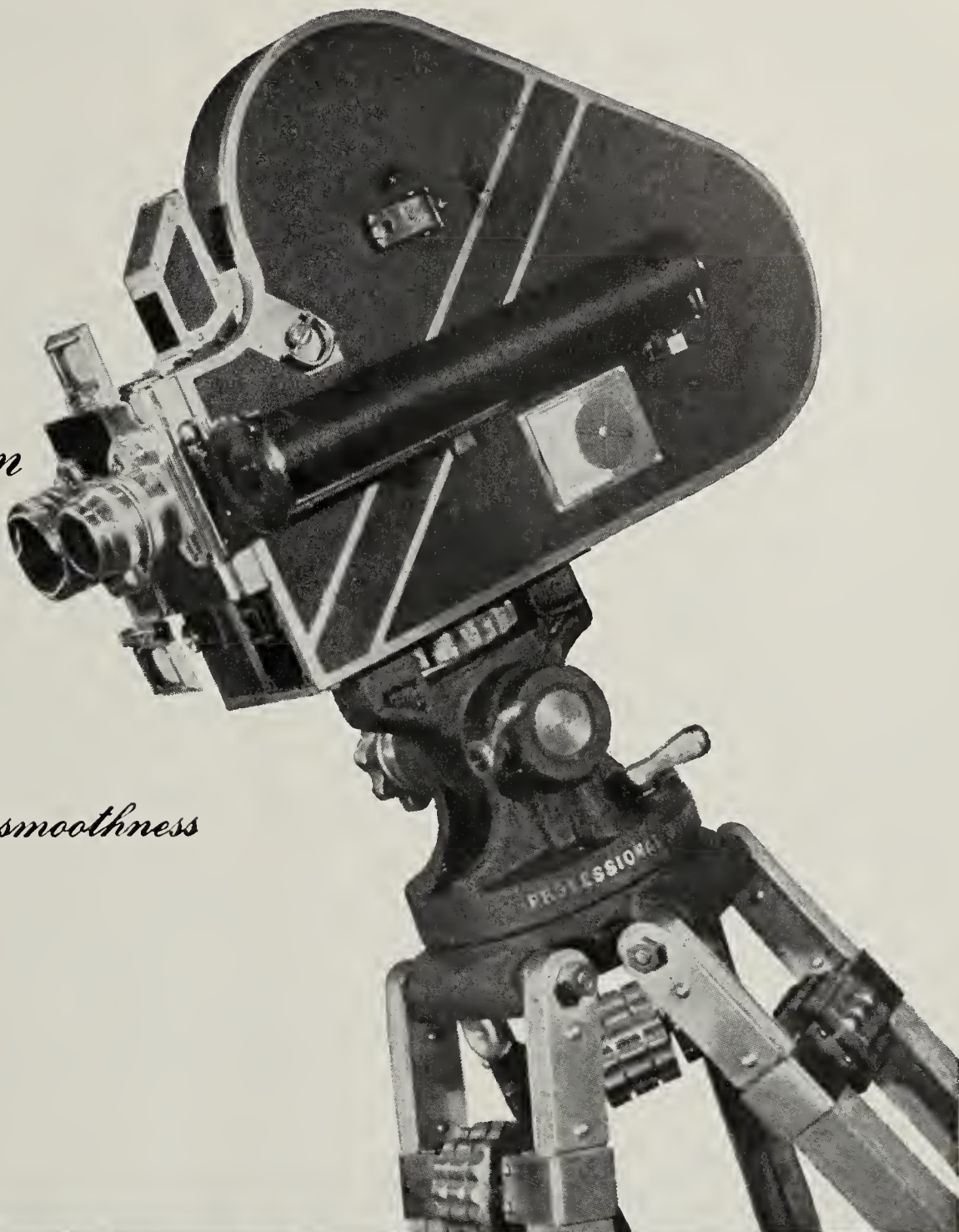
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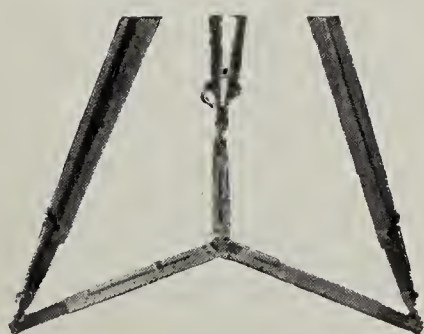


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AMONG THE MOVIE CLUBS

Amateur Club of St. Louis

Leslie Easterday was elected president of Amateur Motion Picture Club of St. Louis, with annual banquet for installation held at the De Soto Hotel on evening of June 24th. Other officers include: C. E. Talbott, first vice-president; Martin Manoville, second vice-president; George Hysore, secretary; Gordon Rustemeyer, treasurer, and W. R. Roysdon and Werner Henze, directors.

Lon Wadman won the club's Class A best film contest with "This'll Kill You." Class B award went to Frank and Dorothy Sperka for "Museum of Memories."

Feature of the annual banquet was the stage show presented entirely by members of the club. Wadman acted as master of ceremonies, with specialties presented featuring Frank Sperka at the marimba; Dorothy Butteger, singer; Werner Henze presenting several fast character sketches; Louise Rassmussen at the piano; rhythm taps by Harriett Wadman, and a high kick waltz by Loretta Callahan.

San Francisco Cinema

Full length travelogue on "Guatemala," photographed in kodachrome by C. E. Stahl was the main feature of the July 16th meeting of Cinema Club of San Francisco, held at the Women's City Club. Dinner for members in the cafeteria preceded the session.

Tri-City Cinema Club

New officers to head the Tri-City Cinema Club (Davenport, Rock Island, Moline) for the coming year comprise: president, Tom Griberg of Moline; first vice-president, Carl T. Asmussen, Davenport; second vice-president, L. E. Wass, Davenport; secretary-treasurer, Dr. H. H. Parsons, Moline; trustees, Mrs. S. B. Snyder, Rock Island, Claire F. Smick of Rock Island, and A. B. Cornelius of Davenport. Elections were held at the June 18th meeting held at Rock Island.

First prize for the best movie shown by a club member during the past year was awarded Harry J. Lyete of Davenport; with Tom Griberg receiving the second prize, and Dr. Parsons the third award. Tri-City will suspend meetings for July and August, resuming in September with session at Davenport.

Utah Cine Arts Club

Utah Cine Arts Club of Salt Lake City held an outdoor picnic and meeting on evening of July 17th at Box Elder Flats and amphitheatre in Mill Creek canyon. Highlight of the film program was "Moon Over Sun Valley," a kodachrome subject shown through courtesy of Union Pacific. Member films included contributions by Al Morton, Theo Merrill, LeRoy Hansen and Al Londema.

Los Angeles Cinema Club

Lenses and optics provided the subjects of the July meeting of Los Angeles Cinema Club, held in Lecture Room of the Los Angeles County Museum on evening of July 1st. Session was strictly along technical and scientific lines for the benefit of members to improve knowledge of fundamentals for better picture making.

Program included: film through courtesy of Bausch & Lomb Optical Co., "Better Vision—Elementary Optics"; lecture on "Applied Optics From a Layman's Point of View," by Lorenzo Del Riccio. Later, internationally recognized inventor and developer of lenses, explained the different types of lenses and how each functioned; Ray Fernstrom, A. S. C., talked on "Selection and Use of Lenses for 16mm. Photography"; while Max Bray of Bray Optical Co. presented discussion on "Care of Lenses." Fred C. Ells talked on "Accessory Lenses," with a film demonstrating uses; Bob Frazier of Acra Instruments Co. offered his expert experience and information on lens coatings, with demonstrations of coatings, their uses and values.

Seattle Amateur Movie Club

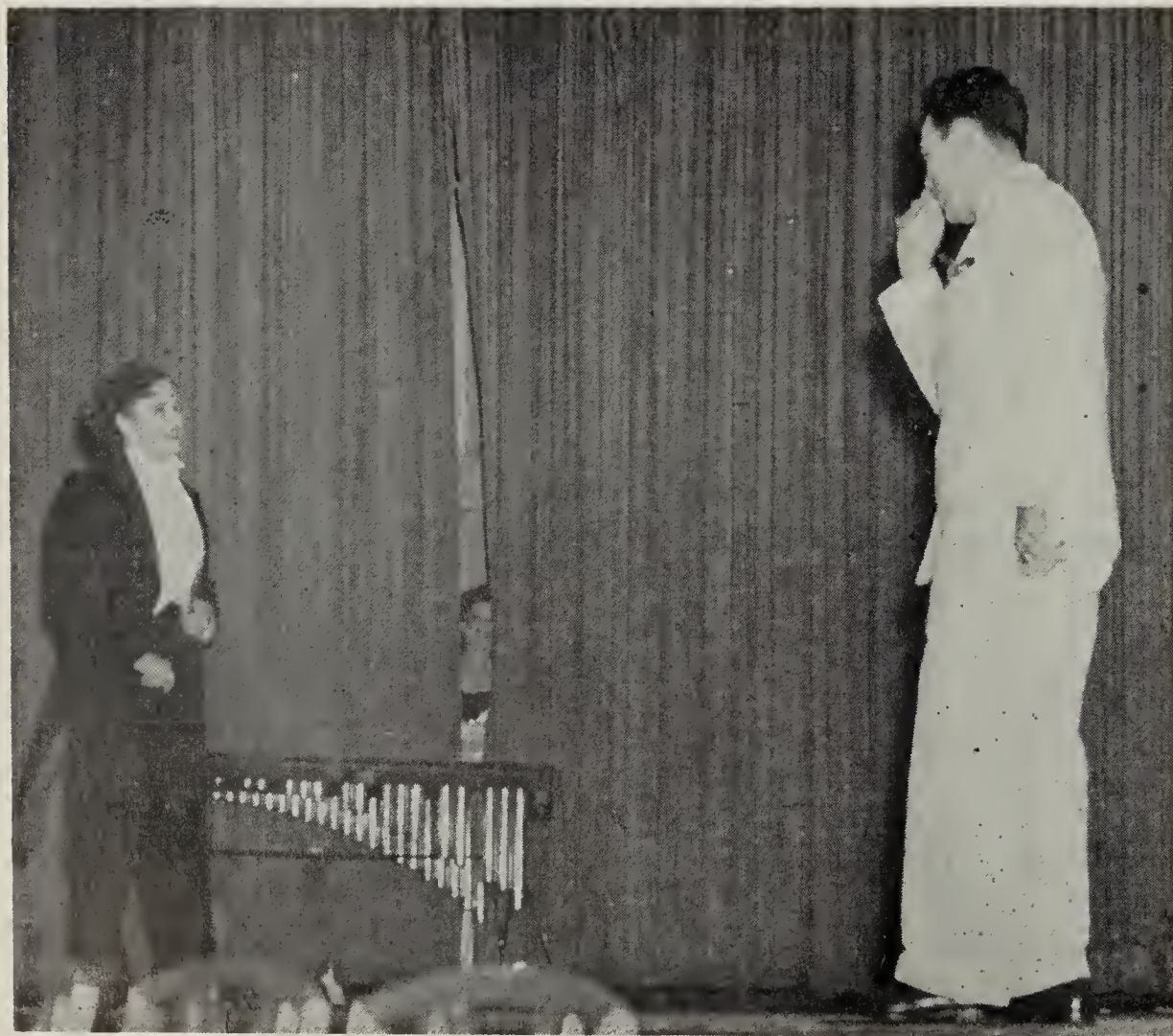
Picnic of Seattle Amateur Movie Club was tentatively set for the last Sunday in July, with members slated to head for Sunrise location on Mount Rainier. Regular meeting on July 9th, held in Parish Hall of Church of Epiphany, presented film program featuring "Baie St. Paul," a 1944 best film by Frank Gunnell of New York from library of ACL.

La Casa, Alhambra

July meeting of La Casa Movie Club of Alhambra, California, was held at the YMCA on the 15th, with film program lined up by R. L. Johns comprising "Skiing" (8mm.), by Johns; "Parade of Beauties" (16mm.), by Ted Harper; "Death Valley" (16mm.), by Frank Knaus, and "Mexico—Tourist Viewpoint" (35mm.), by Hugh S. Wallace. August meeting of the club will be held in the Los Angeles County Park at Arcadia.

Los Angeles Eight

Regular monthly meeting of Los Angeles Eight MM. Club was held on July 9th at Bell & Howell Auditorium. Special feature of the evening was a complete demonstration of Ansco color films for both movies and slides by a company representative. William J. Millar was elected to the board of governors to fill vacancy created by absence of Claude W. A. Cadarette for next two years. Trophies for the club's annual contest were displayed, with president W. D. Garlock urging members to make pictures for entries.



STAGE SHOW BY MEMBERS at annual banquet of Amateur Motion Picture Club of St. Louis. Harriett Wadman, Loretta Callahan, (making entrance between curtains) and Lon Wadman.

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black-and-white films. (And black-and-white films can be tinted or toned in a variety of shades to avoid a jarring contrast when assembled with Kodachrome. The Kodak Data Book, *Formulas*, has the story.)

And here's a tip to pass

along to some of your less experienced movie-making friends — *Ciné-Kodak Panchromatic Films receive Kodak's automatic corrective processing that compensates for all average exposure errors . . . permits a wider latitude in exposure judgment.*

But whatever your film choice, Kodachrome or "Pan," remember that most 8mm. and 16mm. movies, and the best 8mm. and 16mm. movies, are made on Ciné-Kodak Films. Eastman Kodak Company, Rochester 4, N. Y.



When all possible film speed and detail are important, you'll appreciate the plus factors of Ciné-Kodak Super-X and Super-XX Panchromatic Film.

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Kodak

New GE Exposure Meter

Production of a modified form of the General Electric DW-58 exposure meter, which incorporates the new American Standards Association (ASA) exposure-index numbers, has been announced by the Meter and Instrument Division of the General Electric Company.

General Electric has made this change



in the interest of standardization and is adopting the new, improved film-rating system developed by the American Standards Association. This system is also being adopted by all the nation's leading film manufacturers for all classes of users, and it was used by all photo units of both the Army and the Navy during the war.

The numbers in the ASA system are so arranged that they are close enough to permit their use with all previous model G-E exposure meters with the minimum amount of difficulty. This meter has the same instrument mechanism as the DW-58 meter recently announced by GE, except for the dial on the front.

New Filmosound Releases

The following current 16mm. film releases are available from the Bell & Howell Filmosound Library:

Educational

The Unseen Power (10 mins.)

New two-reel version of Paul Roth's documentary "Face of Britain," especially prepared for church and school by the Religious Film Society. Release date: November 1, 1946.

Recreational

Night Club Girl (Universal) (6 reels)

Title is misleading. Actually a homey story of farm kids who crash Hollywood on the strength of their corn chowder rather than on their not-too-bad song and dance act. (Vivian Austin, Edward Norris, Maxie Rosenbloom). Available from July 5, 1946, for approved non-theatrical audiences.

The Suspect (Universal) (9 reels)

One of the greatest human character studies ever seen on the screen. Kindly shopkeeper kills two people whom the world could spare, then surrenders. (Charles Laughton, Ella Raines, Rosalind Ivan). Available from July 26, 1946, for approved non-theatrical audiences.

DuPont Promotes Executives

Arthur H. Burkhardt has been appointed manager, and Frederic B. Sackett assistant manager, of the DuPont Photo Products plant at Parlin, N. J. Burkhardt succeeds the late Karl R. Myers as plant manager. Both officials have been with the company for many years.

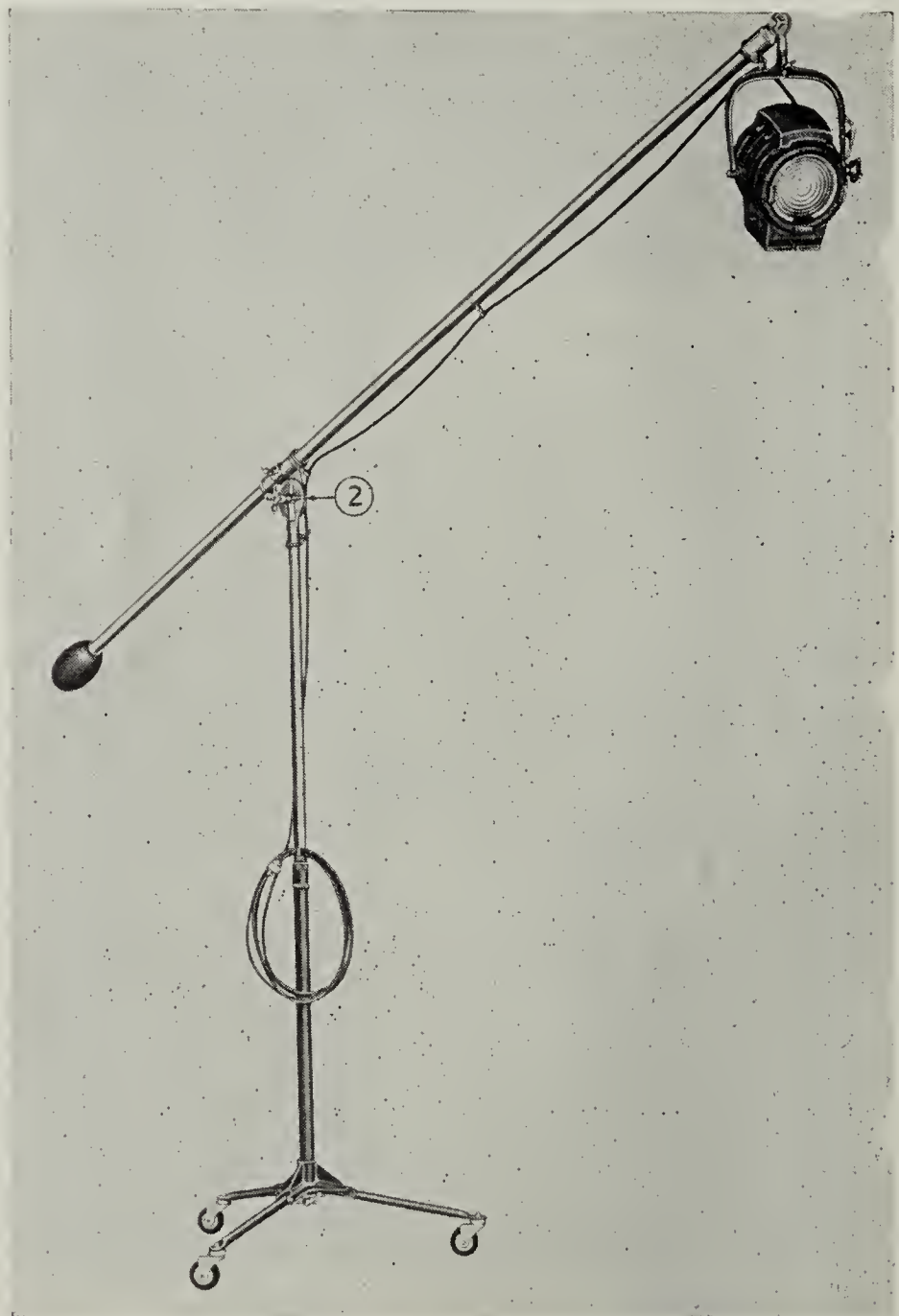
NEW . . . Self-Adjusting Boom Light

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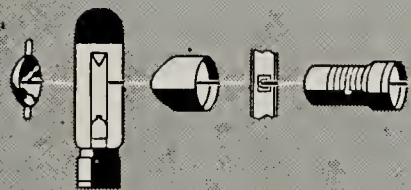
Sound or silent films, black and white or color, normal or slow motion all are possible with The VICTOR Animatophone — the world’s finest. May we assist you in making your home the center of modern entertainment and learning.

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THINGS TO THINK ABOUT WHEN BUYING A PROJECTOR



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Cinema Workshop

(Continued from Page 279)

But it is not as simple as that. There are other elements of dramatic construction that must be incorporated into a successful screenplay.

Firstly, the film should begin in an active key—one that is lively, dramatic, interesting, or rich in suspense. Avoid too leisurely an opening; it tends to lull the audience into an indifferent frame of mind. Introduce the main characters, and give some explanation of the basic situation. Suspense, as we have said, is a fine thing—but an audience requires certain explanations; it does not relish being left up in the air.

Similarly, an opening can be too dramatic or lively. It may actually be more exciting than anything that follows, so that the rest of the film becomes dull anti-climax. The ideal script is so arranged that each *sequence* builds higher than the last. In this way there is an overall rise in audience-interest ending with the last or climatic *sequence*, which should actually be the highest point of action in the film.

In the same way each *sequence* builds to its own sub-climax before going on to treat a different phase of the story. Build up to your best *scenes* carefully; create a setting, so that when these *scenes* appear on the screen they will seem to come as a logical climax, rather than merely spectacular shots that have been thrown in for effect.

Obviously, a script cannot continue to build in a perfectly straight line. A diagram of the ideal script would look more like a mountain range with each climatic peak rising higher than the last. Between each of these peaks there is a "lull" or temporary letdown in dramatic intensity. These lulls are necessary in order to give the audience a chance to "catch its breath," psychologically speaking. They also provide light and shade in the changing pattern of the story.

The ending of the screen story also requires special attention. It is here that all the loose ends of the narrative are tied snugly together and formed into a final resolution. The audience should not be left hanging in the air—rather, it should experience a feeling of satisfaction and finality at the close of the film. Once the ending of the film has been initiated, the story should move steadily forward to the final *fade-out*, not pausing to go off on tangents or involved explanation. Hit your audience with the final climax, leave them glowing in reaction to it, then speedily conclude your screen story.

The basic element of the *dramatic* screenplay is *conflict*. Without a certain opposition of characters and elements there can be no drama. In other types of films, *comparison* and *contrast* may take the place of actual *conflict*. But it is a proven fact that an audience will soon tire of a screen story that runs too smoothly.

Another factor of prime importance is *motivation*. An audience requires a reason or explanation for everything that

happens on the screen. The audience wants to know *why* a character acts thus or so. There must be a reason behind every action. The efficient script-writer makes these explanations logically during the exposition of the story.

Reaction shots are close-ups of crowds or individuals indicating their reactions to whatever situation is taking place. These shots are extremely valuable in that they stimulate human interest and bring the audience closer into the story; the audience will tend to react in the same way as the character shown and will more nearly "feel" the impact of the screen situation. It is well to write in suitable reaction shots for this reason, as well as for variety, pace, and tempo.

Parallel action is a constructive device which indicates several threads of action taking place at the same time and is accomplished by repeated cutting back and forth from one situation to the other. Such a device, if well-used, is very effective in building suspense.

The most important thing for the script-writer to learn in dramatic construction is *what to leave out*. Anything that does not contribute to the atmosphere, mood, or action of the story should be deleted. Cut out the "deadwood" that clutters up the script, and the salient facts will stand out much more effectively.

Planning Individual Scenes

In planning separate scenes of the script, variety of "point of view" is essential. By point of view we mean *camera angle* and *image size*, both of which are motivated by the subject matter of the scene. There should always be a reason why a certain *angle* or *composition* is used; a shot should never be just thrown into the script. Composition depends upon the placement of the camera in relation to the elements within the scene.

Remember that the audience sees only as much of a situation as the camera is willing to show. For this reason, the general locale should be well-established at the beginning and re-established at other points in the story so that the audience will not become confused.

Image size is a relative term. Obviously a *close-up* of a grain of wheat would be executed differently from a *close-up* of the Empire State Building. For this reason we can describe the various *image sizes* only in rather general terms.

Big Close-up (sometimes called Insert)—A very large close-up of an object filling the screen. When the subject is a face, the frame cuts at the chin and at the top of the head, and may even show just a portion of the face, such as the eyes or mouth. This is a highly dramatic shot when correctly used.

Close-up (sometimes called Close shot)—A conventional shot cutting from the top of the shoulders to a few inches above the head when the subject is a person. Actually the *close-up* is the most emphatic of all shots. It focuses attention down to a sharp point and should be used where some small action or expression is to be pointed up dramatically.

Two-shot—As the name implies, this

shot is used to show two people together in a scene from a rather close distance. The frame cuts them about from the level of the elbows to a few inches above the head.

Medium shot—This shot shows objects or people from a medium distance, giving some idea of the background also. It is about right for scenes showing three people together, cutting them about at the knee. It is a tendency for novice movie-makers to use an overabundance of *medium shots*, so that their films suffer from "medium-itis." Medium shots should be alternated with long shots and close-ups.

Long shot (sometimes called full shot)—This is a broad term and may mean anything from an overall view of a group of people to a panoramic shot of vast areas of terrain with great masses of people.

Obviously there are many other types of scenes falling between those listed above, but these are the most important standard shots and variations can easily be made from them.

Transition Devices

As we have said in the section on *continuity*, there should be an inter-relation between separate *scenes* and *sequences*. A film does not sharply jump from one *sequence* to another. Rather, the transition is made smoothly by means of various devices such as: *fade-in* and *fade-out*, *cut*, *dissolve*, and *wipe*.

The *fade-in* starts with a black screen upon which the image gradually appears. This device is used to begin a sequence.

The *fade-out* reverses this process, with the image gradually disappearing until the screen is black. It is used to end a sequence and carries with it an air of finality, so that great jumps in time, place and action can then be made.

The *cut* is a simple break in subject matter and provides a quick shift from one scene to another without any apparent interruption to the sense of the *sequence*. It is made simply by splicing the end of one scene to the beginning of the next. It is considered bad technique to cut from a moving camera shot to a static shot.

The *dissolve* is a device in which one scene is gradually faded out while the next scene fades in over it, so that they seem to blend one into the other. It implies a strong sense of connection between the two scenes, but usually accounts for a shift in time, place, or action. It is smoother than a *cut* and less definite than a *fade*, but should not be used as a substitute for either one. It is a highly effective transition device but loses its effectiveness if used too frequently.

The *wipe* is a trick effect in which one scene seems literally to push or wipe the other from the screen. It is not too widely used in the photoplay, but is sometimes effective in novelty shorts or documentary films.

Format of the Script

We shall not go too deeply into detail as to the actual *format* of the script, as this form varies with the type of film

(Continued on Page 295)

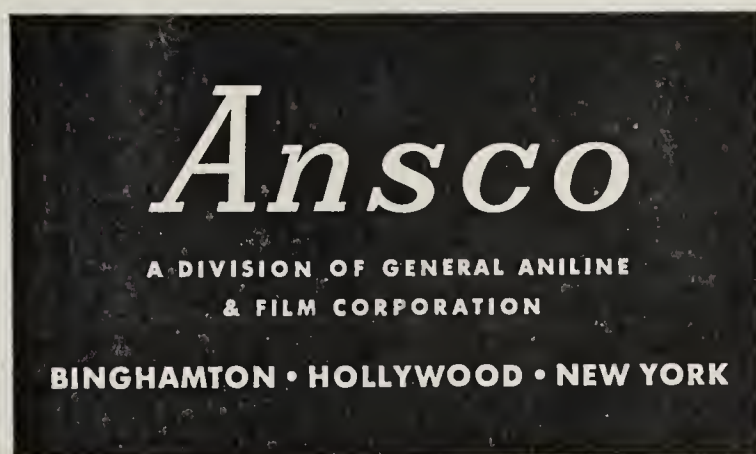
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Today the cinematographers who use Supreme Negative film reap the benefit of Ansco's years of photographic research and experience—the same unceasing effort to produce better things which was in a large measure responsible for two awards from the Academy of Motion Picture Arts and Sciences “for major achievement in research and emulsion manufacture . . .”

The Ansco Supreme Negative film of 1946 is a still finer film, thoroughly reliable in every respect and worthy of your complete confidence.



KEEP YOUR EYE ON ANSCO — FIRST WITH THE FINEST

Aces of the Camera

(Continued from Page 275)

the set and sprayed through jets. It took weeks of experimentation and a lot of ingenuity on the part of Bitzer before the idea became a reality. But when it did something had been added to the technical annals of motion pictures.

When Griffith made "America," Vince, in charge of the second camera by then, conceived the idea of following the action of Paul Revere's ride with an Akeley camera. As the horse galloped across the green New England fields and jumped the low stone walls there were problems still to be solved that today's cameraman takes in his stride. But that idea also became a reality and something else had been added.

Vince's career as a cameraman has been nothing if not exciting. After leaving Griffith he worked for Pathe and Fox as a newsreel cameraman covering such headline events as the Lindbergh trial, the crash of the Shenandoah, some of the most spectacular fires in the history of the country, and some of its most famous gangster crimes. Acting on a tip, Vince was there with his camera when Legs Diamond was shot. And again, he was in on the raid that resulted in the capture of Waxey Gordon.

In 1926 he shot the first big football game ever photographed with synchro-

nous sound, the Army-Yale game, and it was accomplished with a single-system camera converted from a Bell & Howell that required 400 volts of B batteries to run it, was powered by a motor that weighed twenty-five pounds, and a fly-wheel on the camera that weighed over eight pounds. To ensure as much silence as possible the drive belts were made of cotton, and the shutter was an optical glass disc opaqued except for the lens aperture. The wiring was such that the cameraman was constantly in danger of electrocution.

When, in the following year, Vince brought this camera to Hollywood, it was the first one the town had seen. That is, it was the first one the select few in town had seen, because the crew was housed in a special bungalow on the Fox lot and their equipment lodged in a garage with a 24-hour a day guard.

But Mary Pickford, Doug Fairbanks and Charlie Chaplin, among a few others, expressed an interest and secured permission to look it over. It was part of Vince's job to do the demonstrating, and part of his demonstration was to turn the camera on the notables—thus securing the first sound-on-film footage of some of the great names in the industry.

In 1933 Vince returned to New York to take charge of the photographic department of Fox East Coast studios. Among his other assignments he shot

the tests that started any number of today's stars on their road to cinematic fame, among them Tyrone Power, Virginia Fields, Elisha Cooke Jr., Margery Main, Eve Arden and Don Ameche.

When he returned to Hollywood, Vince became an operative and second unit cameraman for the opportunity to work on such pictures as "That Hamilton Woman" and "Jungle Book" for Korda, and "Gone With the Wind" and "Rebecca" for Selznick.

With the best instincts of a showman and the feeling as well as the skill of an artist, he relished the weeks of work spent on the naval battle scenes for "That Hamilton Woman," and appreciated that the efforts involved in those complicated miniatures presented unique opportunities to add to his store of experience. And there was that pleasant glow that comes from pride in accomplishment with the knowledge that he had helped to create, after weeks of patient waiting for the proper combination of weather, that powerful scene in "Gone With the Wind," in which Scarlett, walking into the sunrise, across the scorched earth of her estate, swears eternal vengeance.

As a member of the Naval Reserve, Vince was in uniform shortly before the beginning of hostilities. And with rare good judgment was assigned where his talents would be most useful, the Motion Picture Division of the Bureau of Aeronautics. Under his direction a film studio was built for the express purpose of making technical training pictures of a highly secret nature. This studio, on Vine Street in Hollywood, the headquarters of the Naval Photographic Unit in Hollywood, became familiarly known as the Vine Street Pier.

Since his return from the Service, Vincent Farrar has piled up an impressive list of pictures: two of the "Charlie Chan" series, the second unit work on the Technicolor "Bandit of Sherwood Forest," "Two Fisted Stranger," "Down Missouri Way," "Queen of Burlesque," and recently concluded "The Windjammer," Jerry Fairbanks' first feature length picture which stars Bob Burns and makes use of the technique that has made the same producer's "Speaking of Animals" series so immensely popular.

Most of these pictures were made on modest budgets which means, of course, that the cameraman was limited in the amount of time he could spend in setting up for, and composing each shot, a condition that calls for a cameraman with the utmost skill and a perfect understanding of his craft if the picture is to finish on time and not suffer photographically.

That each one of these pictures was considerably enhanced by the deft and imaginative camera work, which in two instances at least lifted the offerings way out of their class and received critical acclaim generally reserved for more expensive productions, is a tribute to a man whose artistry and imagination is balanced by a practical craftsmanship and whose career has encompassed the life of the motion picture industry.

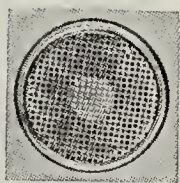
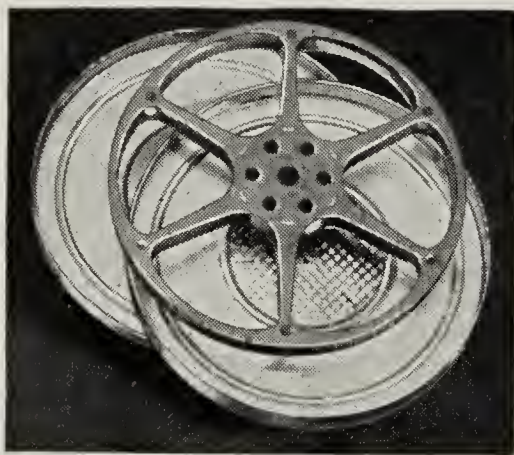
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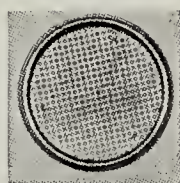
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Bell and Howell Buys Lincolnwood Plant

Purchase of the \$2,225,000 Lincolnwood plant on McCormick Rd., Chicago, from the Reconstruction Finance Corp., and the awarding of contracts for considerable new construction at Lincolnwood have been announced by President J. H. McNabb of the Bell & Howell Company, pioneers and manufacturers in the amateur and professional motion picture equipment fields.

One of the most modern industrial establishments in the Middle West, the three-story E-shaped Lincolnwood plant is of tan brick and glass block construction, has 220,000 square feet of floor space, and is air-conditioned throughout. The latest methods of dust-control, vital in the precision manufacture and assembly of lenses and movie equipment, are employed here.

Leased from the Defense Plant Corporation late in 1942, the building was the setting for a noteworthy—and successful—experiment in optical manufacture. Spurred by urgent government orders for military fire-control instruments, the company achieved mass production of critical military lenses and prisms within a few months. The complex and hitherto mysterious business of making precision optics was broken down into several operations, groups of untrained personnel were schooled in one or two of these operations, and a stream of tank telescopes and naval fire-control instruments began to flow out of the north wing of this “plant in the prairie” before the building’s wiring was completed or the windows were all installed.

The original plant now houses Bell & Howell’s optical, electronic, metallurgical, chemical, and mechanical engineering laboratories, in addition to assembly departments, optical production, and the company’s general offices. Last October the concern completed and occupied another Lincolnwood structure having 24,000 square feet of floor space, wherein optical glass is moulded and annealed and in which warehouse facilities are afforded for the storage of delicate optical equipment.

Additional Expansion Begun

Construction of still another Lincolnwood building, to contain 86,000 square feet of floor space, already has begun, and company officials expect occupancy by mid-summer of 1946. Located on a recently-purchased 41-acre tract adjoining present facilities, the new plant is designed especially to house the firm’s metal-plating, polishing, and case-fabricating departments.

Scheib With Telefilm

Harold A. Scheib, supervisor of animation department of AAF First Motion Picture Unit during the war, and previously with Wilding Pictures, has been appointed head of the 16mm. special effects department of Telefilm Studios in Hollywood.

Evolution of Cameras

(Continued from Page 277)

sound films was the lighting problem, Marley observed. “At first, before the technique of cutting sound as it is practiced today was perfected, three—and sometimes as many as six cameras were used at one time. It was certain that there would always be a long shot camera, a medium shot camera, and one for close shots.

“The difference in quality of the long and short focus lenses was quite apparent,” said Pev, “and we could not light for one set-up at a time. As a result, all the shots suffered in both angle and quality.

Blending the Mike

Sid Hickox, A.S.C., who has been with Warners for a quarter century, recalls the initial sound production problems of the immobile microphone. “We’d cover the mike with a flat board and call in a standby painter,” he stated. “As we cameramen would look through our ‘brown glass’ we would direct the painter on his colors and highlights to blend the board with any wall or drape. After that, the actors would have to stay in place as though they were nailed to the floor, since the mike could not follow them around the set.”

Cinema Workshop

(Continued from Page 292)

being made. A few general points, however, may prove helpful.

Each individual scene should be numbered, and the heading should include the locale, whether the scene is *interior* or *exterior*, time of day, image size and angle, and any other technical data necessary. *Example*: SCENE 28—INTERIOR MOUNTAIN CABIN—NIGHT—MEDIUM SHOT—SHOOTING TOWARD FIREPLACE.

The action is then described in detail, with all camera directions set off in capital letters. If it is a direct sound picture the dialogue also appears headed by the speaker’s name. Blocks of type describing action are usually indented about five spaces closer than blocks of dialogue, so as to clearly differentiate between them.

If the picture is to be narrated, the page is divided into two parts with action appearing on the left half of the page, and the descriptive narration appearing opposite it on the right.

Scenes, when typed in screenplay form, should not be crowded too tightly together. Leave margins and enough white space between scenes (4 to 6 typewritten lines) for notations and inevitable revisions to be made directly on the script. The whole script should be bound or stapled together with a sturdy cover that will permit a great deal of handling.

We have discussed the *script* and its use as the blueprint of the film. We are now ready to go on to the next phase, which is the active planning of the production itself.

Next Issue: Production Planning.

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Photo by Arthur C. Allen for Camp Leelanau

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Sound and Visual Image

(Continued from Page 286)

that is present in a given atmosphere—our receptivity is not that acute. Rather, we tend to notice and react to just the more dominant sounds of the particular situation. Applying this principle to sound recording, modern engineers are now more selective in providing effects for sound backgrounds.

Psychological Role of Sound

As a complement to the visual image, sound produces its greatest psychological impact upon the audience by means of *association of ideas*. In real life, if we hear the sound of an airplane motor, our minds tend to create a picture of the plane itself. Similarly, on the screen a sound background of, let us say, factory sounds will provide a factory atmosphere even if only a little corner of a workshop is shown visually.

When closely co-ordinated with a visual pattern of action, proper sound and music can produce an emotional pull amounting almost to pain. In the same way, comedy can be sharpened to a hilarious degree.

Sound and the visual image should work together so that each gains quality from the other. But in any given scene, one or the other should dominate. If the sound and the picture are of equal importance, they will fight with each other for the audience's attention, and the em-

phasis will be lost. It is a common fault even today that background music is sometimes recorded so loudly that it not only drowns out the dialogue, but weakens the power of the visual action as well.

There are situations when the picture rightfully becomes subordinate to off-screen sounds, and here the audiences' imagination is brought into play—often very forcefully. A murder, for instance, can be strikingly suggested by off-screen sounds while the camera remains on some neutral segment of the scene, showing none of the actual gruesome details.

Sound can also do much to set the mood of a locale. The film, "The Letter," for example, begins with a long establishing dolly shot of a rubber plantation. As the camera moves slowly about the set, we hear first the musical dripping of rubber sap from the trees, then the cries of tropical birds, the mumble of native voices, and finally the plunking discord of jungle musical instruments. The total effect is a sound tapestry that clothes and enriches the visual picture.

The element of contrast is important in drama, and there are times when sound can be made to contrast most effectively with what is being shown on the screen. In "This Gun for Hire" a cold-blooded killer methodically cleans his gun for a murder while a gramophone blares raucous jazz. In "Dark Victory," the main character's blindness is brought into sharp relief by the contrast of happy children's voices laughing and shouting

in the background. In "Algiers" a cringing stool-pigeon is killed to the jangling accompaniment of a player piano. In each of these cases the sound contrast added drama to the scene.

Very often sound produces a powerful bridge between sequences. In the British film, "The 39 Steps," a woman blunders into a room and finds a corpse on the floor. She opens her mouth to scream, and we hear the high-pitched screech of a train whistle as the scene cuts to a train crashing out of a tunnel.

A sequence from the film, "Mildred Pierce," illustrates perfectly how sound can be used to build suspense. At the beginning of the picture the main character, suspected of murder, is brought to police headquarters and made to wait in an ante-room. She is nervous and distraught; she has even contemplated suicide. Now she sits in the police station waiting to face a hostile detective.

In this sequence there is very little dialogue, but a clock can be heard ticking then a telephone jangles, a policeman coughs, a paper rattles. All these sounds rip through the stillness of the room, tearing at the woman's nerves. Actually, the sounds were recorded to an exaggerated loudness and in a slightly distorted pitch to suggest how inconsequential noises might grate on the nerves of a person in such a predicament. The whole effect was quite powerful dramatically.

Very often a steady, rhythmic pattern



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of sound underscoring a scene can build suspense and keep an audience receptively alert. Alfred Hitchcock, the British "Master of Suspense," likes to use the steady clicking of train wheels on tracks to achieve just such mood. His spy-thriller, "The Lady Vanishes," takes place almost entirely on a train and illustrates how sound can sub-consciously set the pace for drama.

Mr. Hitchcock also knows how to use *silence* effectively. His film, "Lifeboat," had no musical underscoring except for the titles. The dreadful stillness of the calm sea was sharply brought out by the deliberate avoidance of all but essential action sounds. Silence also served to point up another film, "The Life of Beethoven," which was released several years ago. In one sequence a storm rages outside while the composer sits working at his piano. The crash of thunder and the liquid hammering of the rain fight to overwhelm the equally tempestuous piano music. Suddenly all sound ceases, and we see in close-up the composer's stunned reaction as he realizes that he has gone deaf.

Sound Research Continues

Behind the scenes of cinema sound development, one can find a corps of engineers still working to improve the voice of the motion picture just as they have been working for the past twenty years.

There have been many important technical developments during that time, few of which the general audience would recognize by name. But that same audience responds to the clearer, more faithful quality of sound that these improvements have made possible.

One of the foremost technical strides was the development of the dynamic microphone, a rugged, versatile, mechanical "ear" that can be trundled freely about the set, recording sound with a fidelity and sensitivity which even the human ear cannot achieve. Another important accomplishment was the elimination of surface noises which sounded like steam escaping or eggs frying and clouded the dialogue.

Push-pull recording opened up new technical pathways, as did the perfection of monochromatic light for recording. Previously, the various rays of light present in the recording lamp came to a focus in varying layers of the emulsion due to a difference in wave length. The result was a fuzzy quality of sound. Monochromatic light rays, however, all come into focus at the same layer of emulsion, thus guaranteeing a sharper sound recording.

Multiple-channel recording made it possible for music, singing, and dialogue each to be recorded separately and later blended into perfect balance. This, in

turn, led to the development of the two-way speaker system in theaters: one speaker for the high frequencies, and one for the low ones.

Experimentation in the field continues, with each major studio operating its own sound research laboratory. The results are passed on to help make motion pictures more real and more enjoyable to watch. At this moment, wire recording is being introduced as a compact, simple, and portable means of recording on-the-spot sound effects. It is just one of the many new sound developments to which we may look forward.

Kreuzer Promoted by RCA

Barton Kreuzer has been promoted to post of manager of RCA film recording activities, according to company announcement. Veteran of nearly 20 years on the RCA sound engineering staff, Kreuzer headed RCA sound recording at the Hollywood plant for a long period.

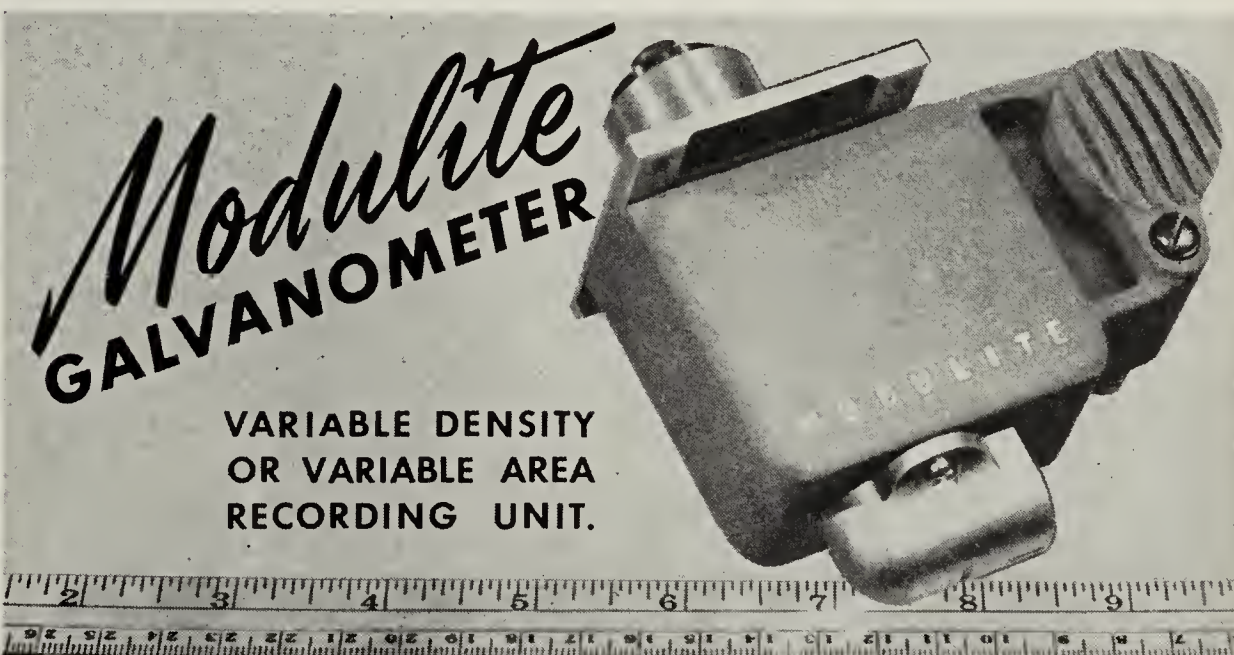
Waller Heads B&H Branch

J. V. Waller has been appointed manager of the Washington branch of Bell & Howell following his return to the company after war service with the Navy.

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GENERAL PRECISION RESEARCH FOR AMPRO

Harry Monson, Vice-President and Sales Manager of Ampro, reports enthusiastically, that they are ready to take advantage of the work of the leading physicists and engineers who are now on the laboratory staff of the new General Precision Equipment Research and De-

velopment Laboratory, establishment of which was announced recently by Earle G. Hines, President of General Precision Equipment Corporation.

Dr. R. L. Garman will head the staff and is the same Dr. Garman who has contributed so much to radar trainer design for N.D.R.C. and who has been responsible for the design of more than twenty systems in that field. Dr. Garman has authored many publications as well as co-authored the book "Experimental Electronics."

Dr. M. E. Droz is also a staff member, probably better known for his service at the Radiation Laboratory of M. I. T. on Radar Trainer problems which included electrical and mechanical computers, pulse circuits, supersonics in both air and water.

Also assigned as Chief Engineers of projects are Mr. M. B. Karelitz, Dr. F. B. Berger, Mr. R. W. Lee, and Mr. G. T. Lorance. Dr. Garman lists an additional nineteen physicists and engineers already assigned to various departments of research and development for the Pleasantville, New York, activity.

Mr. Monson states, "Ampro and other subsidiaries of General Precision Corporation, will have complete access to the services of these physicists and engineers and to the research and development carried on by the staff in this great new laboratory."

"We already have a fine engineering staff, which the popularity and demand for Ampro conclusively proves. In addition, Ampro will be in a position to employ such scientific accomplishments which emanate from the Laboratory, passing them on to dealers and consumers. Here is an activity which we frankly could not support ourselves and we doubt that any single manufacturer of 16mm. projectors could possibly afford to maintain."

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Make 'em Move!

"Make your movie, move, Man! You're not hanging it on a wall—you're running it through a projector!" This most pertinent advice is clipped from the monthly bulletin of New York Eight MM. Motion Picture Club and passed along for the benefit of amateur movie makers.

Film Council Formed by 16mm. Industry

Formation of the Film Council of America, in the interests of the 16mm. industry, by progressive organizations in the non-theatrical and educational film field was announced recently. Mr. C. R. Reagan, Dallas, Texas, was made president.

Speaking on objectives of the Council, Mr. Thomas J. Brandon, of New York, stressed the necessity for continued harmony between the commercial and educational branches of the 16mm. industry and outlined the following seven-point program:

1. To form committees in 26 key cities designed to organize municipal groups.
2. To establish a project to document the work of 16mm. films during the war.
3. To set up annual awards for outstanding work done in the 16mm. field.
4. To foster increased research and development.
5. To stimulate adult education through 16mm. films.
6. To work more closely with consumer groups, such as the American Legion and Parent Teacher Associations.
7. To continue to cooperate with government agencies, and to urge the agencies to ask the industry to help solve their film distribution problems.

RCA Increases 16mm. Production

Increasing production facilities for 16mm. sound film equipment, RCA has transferred activities of this division from the Indianapolis plant to Camden, N. J. A complete line of 16mm. sound film projector models will be marketed, according to company announcement.

Day With Victor Animatograph

Lewis H. Day has been appointed public relations director for Victor Animatograph Corporation, according to announcement by executive vice president S. G. Rose. Day's duties will include direction of the company's advertising and promotional programs in addition to public relations activities.

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Curtiss-Wright Corp. Buys Victor Animatograph

Victor Animatograph Corporation, one of the largest manufacturers of 16 mm. motion picture projectors, cameras and allied equipment, has been purchased outright by the Curtiss-Wright Corporation, a leader in the aircraft industry.

Alexander F. Victor, president and founder of the company bearing his name, will continue as director of engineering activities; while executive vice-president Samuel G. Rose will remain with the organization as business administrator. Plant and main offices of Victor, together with personnel, will continue to be maintained at Davenport, Iowa. Deal is strictly an outright purchase of the company; although naturally the latter will have access continually to the counsel of the research and engineering staff of Curtiss-Wright for improvement of the Victor product.

Mr. Victor, the pioneer in designing and perfecting projection equipment specifically for the fields of visual education and non-theatrical entertainment, established the company in 1910 with the aid of financing by Davenport business men. From original start in small quarters and five employees, the corporation steadily grew until today it employs 500 in its large plant. Victor continually pressed for safety film standard, which eventuated in the development of 16 mm. non-inflammable film and the invention, design and sale of the first 16 mm. projector in 1923. Both Mr. Victor and Mr. Rose are enthusiastic over the new ownership of the company by Curtiss-Wright, which presages even greater progress in the future.

Semi-Annual SMPE Convention in Hollywood October 21-25

Society of Motion Picture Engineers will hold its semi-annual convention in Hollywood at the Roosevelt hotel for five day period of October 21st to 25th. Technical sessions on new equipment and practices in motion picture production are expected to bring out a particularly large group of papers to eventuate in one of the most successful meetings in the history of the organization.

Howard Marx Joins Ampro

Howard Marx, who, prior to recent service in the Navy, was associated in the 35 mm. division of the film industry, has joined Ampro as assistant to the sales manager.

Sievert Back With B&H

R. E. Sievert, after three years' service in the Navy, has resumed his post as western division manager of the Bell & Howell Filmosound Library in Hollywood. Enlisting in 1942, Sievert was assigned to the Bureau of Aeronautics, taking charge of production and training film libraries.

San Francisco Westwood

Talk on "Opticoating of Lenses" by R. C. MacCollister featured the June 28th meeting of Westwood Movie Club of San Francisco, held at St. Francis Community Hall. Film program of the evening included: "Peonies," by Ed Sargent; "Yosemite Falls," by Walter Johnson; "The Pinnacles," by Ray Luck; "What's It at Who'sits," by Luck, and "Coffee and Doughnuts," by Celeste Swanson.

Members Don Campbell and Eric Unmack presided as instructors at a special informative meeting of the club on July 10th, when various phases of movie making will be explained to members. Doc Gobar, as contest chairman, discloses that annual club contest films will be shown for selection on November 29th. There will be awards for both the 8 and 16mm. classes.

New York Eight

July meeting of New York Eight MM. Motion Picture Club was held on evening of the 15th at the Hotel Pennsylvania. Program featured demonstration of the De Jur Eight projector; an exhibition of kodachrome slides taken by Victor Ancona on a Mexican trip; and Dr. Browne's "Calling Dr. Kildare," which was first prize winner in the recent Metropolitan novice contest. Terry Manos, another member, won third place in the Met contest.

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Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, assignments of A. S. C. members as Directors of Photography on current productions shooting in the Hollywood studios are as follows:

Columbia

Rudy Mate, "Down to Earth" (Technicolor), with Rita Hayworth, Larry Parks, Marc Platt, Edward Everett Horton and James Gleason.

Leo Tover, "Dead Reckoning," with Humphrey Bogart, Elizabeth Scott.

George Meehan, Jr., "Ghost Town," with Judy Canova, Allen Jenkins.

Charles Lawton, Jr., "The Return of Monte Cristo" (Edward Small Prod.), with Louis Hayward, Barbara Britton.

Burnett Guffey, "Johnny O'Clock," with Dick Powell, Evelyn Keyes, Ellen Drew.

Joseph Walker, "My Empty Heart," with Rosalind Russell, Melvyn Douglas, Sid Caesar.

Allen Siegler, "Secret of the Whistler," with Richard Dix, Leslie Brooks.

Henry Freulich, "Mr. District Attorney," with Dennis O'Keefe, Marguerite Chapman, Michael O'Shea, Adolphe Menjou.

Eagle-Lion

Clyde DeVinna, "It's a Joke, Son," with Kenny Delmar, Una Merkel, June Lockhart, Constance Dowling.

Jackson Rose, "Born to Speed," with Johnny Sands, Terry Austin.

Hal Roach

John Boyle, "The Fabulous Joe" (Cinecolor), with Walter Abel, Margot Grahame, Marie Wilson.

Metro-Goldwyn-Mayer

Joseph Ruttenberg, "Sacred and Profane," with Greer Garson, Richard Hart, Bob Mitchum, Florence Bates.

Sidney Wagner, "High Barbaree," with Van Johnson, June Allyson.

George Folsey, "The Sacred Heart," with Claudette Colbert, Walter Pidgeon, June Allyson, Robert Sterling.

Robert Surtees, "Ballerina," with Margaret O'Brien, Cyd Charisse, Danny Thomas.

Harry Stradling, "Sea of Grass," with Spencer Tracy, Katharine Hepburn, Melvyn Douglas, Robert Armstrong.

Charles Salerno, "The Arnello Affair," with John Hodiak, Frances Gifford, George Murphy.

Hal Rosson, "Life's for the Loving," with Gene Kelly, Marie MacDonald, Charles Winninger, Spring Byington.

Charles Schoenbaum, "Summer Holiday" (Technicolor), with Mickey Rooney, Gloria DeHaven, Walter Huston, Frank Morgan, Marilyn Maxwell.

Robert Planck, "It Happened in Brooklyn," with Frank Sinatra, Kathryn Grayson, Peter Lawford, Jimmy Durante.

Karl Freund, "This Time for Keeps" (Technicolor), with Esther Williams, Lauritz Melchior, Jimmy Durante, Jose Iturbi.

Monogram

L. W. O'Connell, "Sweetheart of Sigma Chi," with Phil Regan, Elyse Knox.

Harry Neumann, "Cisco Kid," with Gilbert Roland, Ramsay Ames.

Paramount

George Barnes, "Emperor Waltz"

(Technicolor), with Bing Crosby, Joan Fontaine, Oscar Karlweis, Roland Culver, Lucile Watson, Sig Ruman.

Lionel Lindon, "My Favorite Brunette," with Bob Hope, Dorothy Lamour, Peter Lorre, Charles Dingle, Lon Chaney.

RKO

Milton Krasner, "Katie for Congress," with Loretta Young, Joseph Cotten, Ethel Barrymore, Charles Bickford, Anna Q. Nilsson, Rose Hobart.

Nick Musuraca, "The Bachelor and the Bobby-Soxer," with Cary Grant, Myrna Loy, Shirley Temple, Rudy Vallee.

Roy Hunt, "Trail Street," with Randolph Scott, Robert Ryan, Anne Jeffreys, George (Gabby) Hayes.

Samuel Goldwyn

Gregg Toland, "The Best Years of Our Lives," with Myrna Loy, Fredric March, Dana Andrews, Teresa Wright.

Lee Garmes, "The Secret Life of Walter Mitty" (Technicolor), with Danny Kaye, Virginia Mayor, Fay Bainter, Boris Karloff.

20th Century-Fox

Norbert Brodine, "13 Rue Madeleine," with James Cagney, Annabella.

Joseph La Shelle, "The Late George Apley," with Ronald Colman, Peggy Cummins, Richard Ney.

Arthur Arling, "Homestretch" (Technicolor), with Cornel Wilde, Maureen O'Hara.

Benjamin Kline, "Dangerous Millions" (Sol Wurtzel Prod.), with Kent Taylor, Dona Drake, Tala Birell, Robert Barrat.

Charles Clarke, "Bob, Son of Battle" (Technicolor), with Peggy Ann Garner, Lon McCallister, Edmund Gwenn.

Ernest Palmer, "I Wonder Who's Kissing Her Now" (Technicolor), with June Haver, Mark Stevens, Reginald Gardiner.

United Artists

Johnny Mescall, "Bel Ami" (Loew-Lewin Prod.), with George Sanders, Angela Lansbury, Ann Dvorak, Frances Dee, Marie Wilson.

Lucien Andriot, "Dishonored Lady" (Mars Films), with Hedy Lamarr, Dennis O'Keefe, John Loder, Morris Carnovsky.

Franz Planer, "The Chase" (Nero Prods.), with Robert Cummings, Michele Morgan, Peter Lorre, Jack Holt.

Paul Ivano, "Strange Bedfellows" (Andrew Stone Prods.), with Eddie Bracken, Priscilla Lane, Allen Jenkins, Tom Conway, Arthur Treacher.

Edward Cronjager, "A Miracle Can Happen" (Bogaus-Meredith), with Charles Laughton, Henry Hull.

Mack Stengler, "Dangerous Adventure" (Hopalong Cassidy Prod.), with William Boyd, Andy Clyde, Rand Brooks, Betty Alexander.

James Van Trees, "The Fabulous Dorseys" (Embassy Prod.), with Tommy Dorsey, Janet Blair, Paul Whiteman.

Universal

Stanley Cortez, "Smash-Up" (Walter Wanger Prod.), with Susan Hayward, Lee Bowman, Eddie Albert, Marsha Hunt.

(Continued on Page 302)



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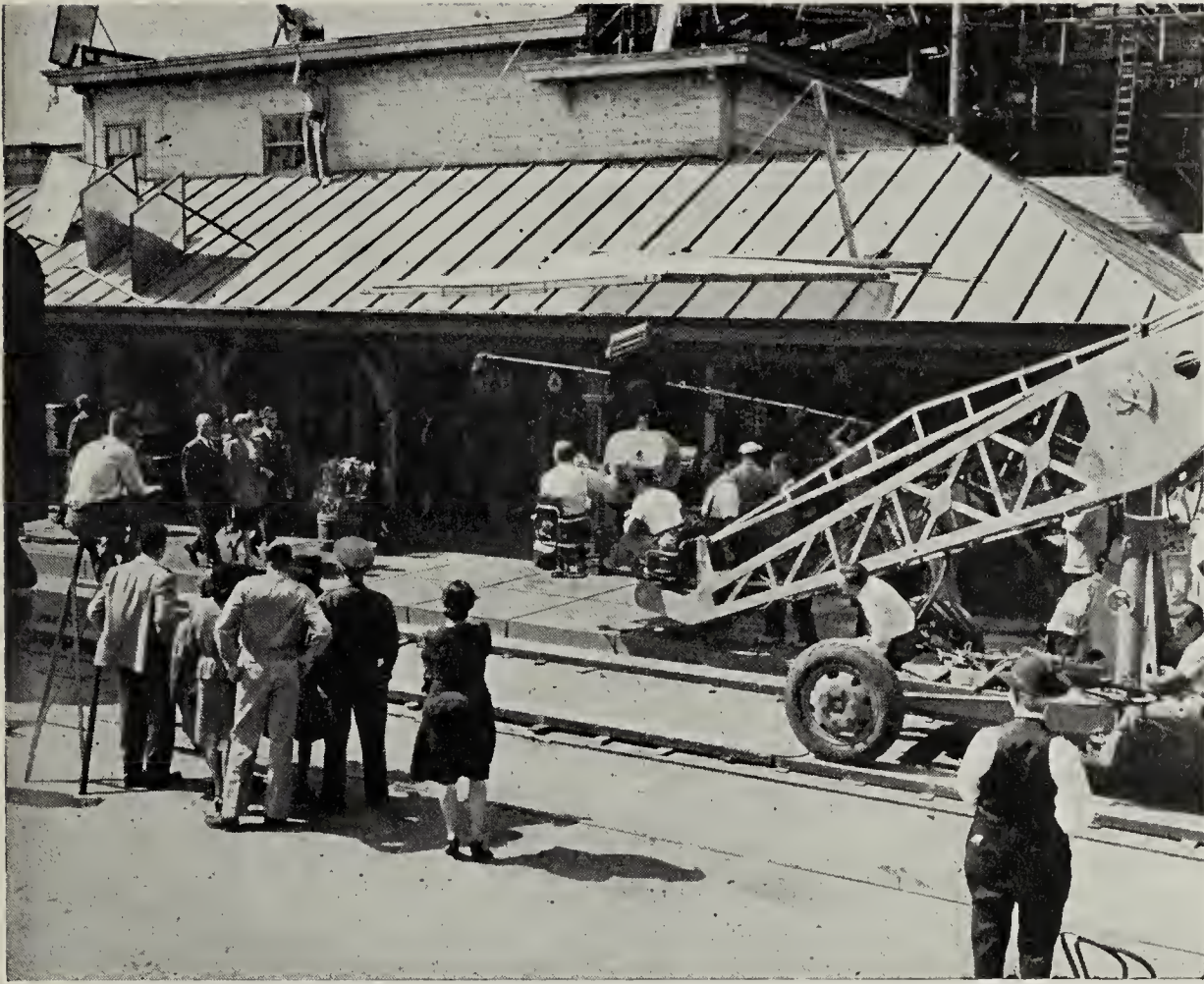
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Academy Research Council

In an endeavor to secure information from Hollywood studio cinematographers for development of a new camera crane, the Research Council of the Academy of Motion Picture Arts and Sciences has sent out a questionnaire asking for suggested ideas which can be incorporated in design of new lightweight lamp equipment, with latter possibly taking advantage of new metals and other materials that may be available.

Special Research Committee, under chairmanship of Fred Geiger of Paramount studios, has been appointed to follow through on the problem. Among the questions listed for answering are:

What types of lamps do you need which are not available at the present time?

Should separate lamps be designed for use in color and black-and-white, or should a universal type lamp be designed for use in both?

For black-and-white, should the committee consider projected light or a spot light similar to the Solar Spot, or a gen-

eral light or fill-in light similar to the side light?

For color, should the committee consider a hi-intensity projected spot light or a general light similar to the Du-Arc?

What do you consider the maximum weight for such lamp or lamps?

What amount of light over what area at what distance do you consider necessary?

Do you believe the lamp should be designed for mounting on the camera?

Do you believe the lamp should be designed for use on the camera crane?

Television Airchecks Via Cameras

Television broadcasts will be airchecked by 16mm. motion picture cameras for the benefit of sponsors and advertising agencies, according to present plans of Telefilm Studios, Hollywood. Latter firm is constructing special camera and apparatus to film television shows when latter become generally sponsored by advertisers.

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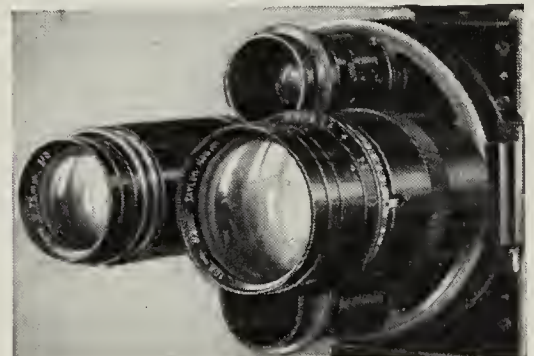
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Survey of 16mm Field

Statistics regarding the number of 16mm. projectors in use for educational and entertainment purposes, their geographical distribution and the types of audiences that view them, are sought in a survey to be undertaken by the Motion Picture Association of America. The survey will be helpful to dealers in planning future sales promotion and advertising.

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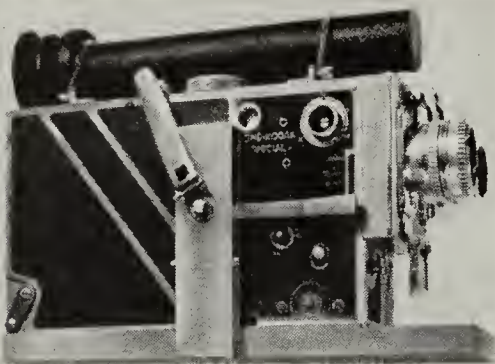
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Current Assignments

(Continued from Page 300)

Russell Harlan, "Ramrod" (Enterprise Prod.), with Joel McCrea, Veronica Lake, Donald Crisp.

Joseph Valentine, "Magnificent Doll" (Skirball Manning Prod.), with Ginger Rogers, David Niven, Burgess Meredith.

Tony Gaudio, "Swell Guy" (Mark Hellinger Prod.), with Sonny Tufts, Ann Blyth, Ruth Warrick, William Gargan.

Virgil Miller, "Vigilantes Return"

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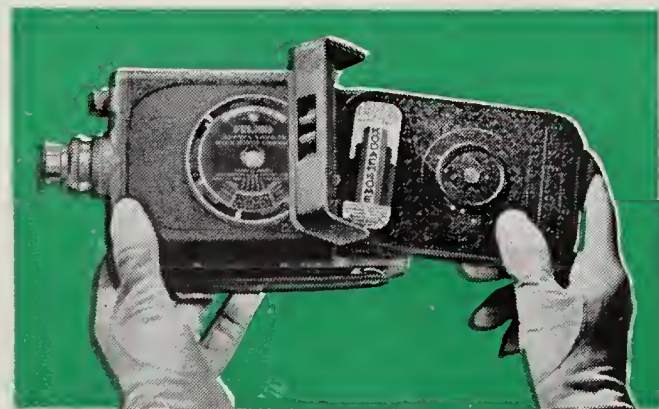
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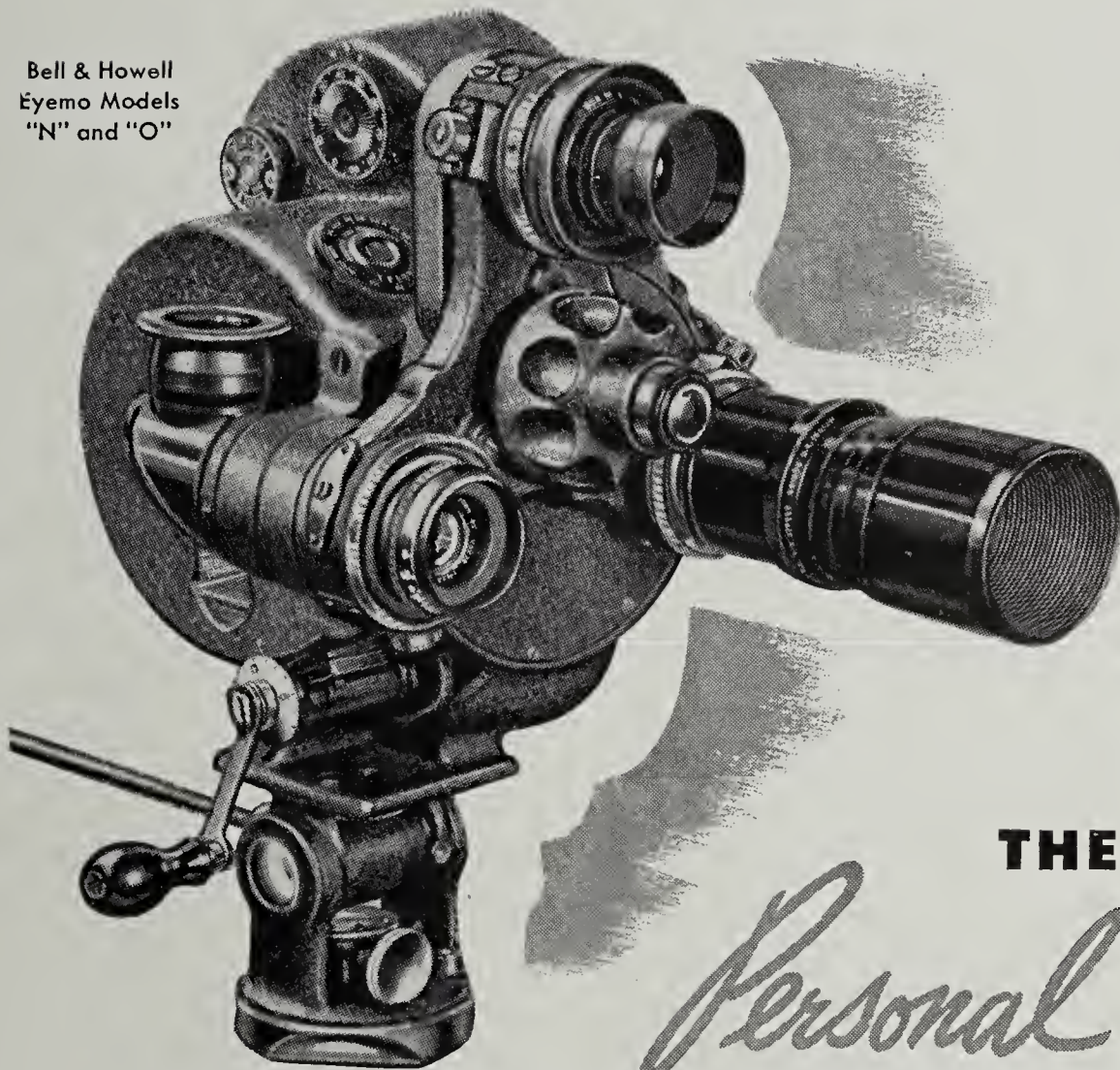


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THE MOTION PICTURE CAMERA MAGAZINE

VOL 27

SEPTEMBER, 1946

NO. 9

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ON THE FRONT COVER Rosalind Russell, star in "My Empty Heart" for Columbia Pictures, is set for a close close-up by Director of Photography Joseph Walker, A. S. C.



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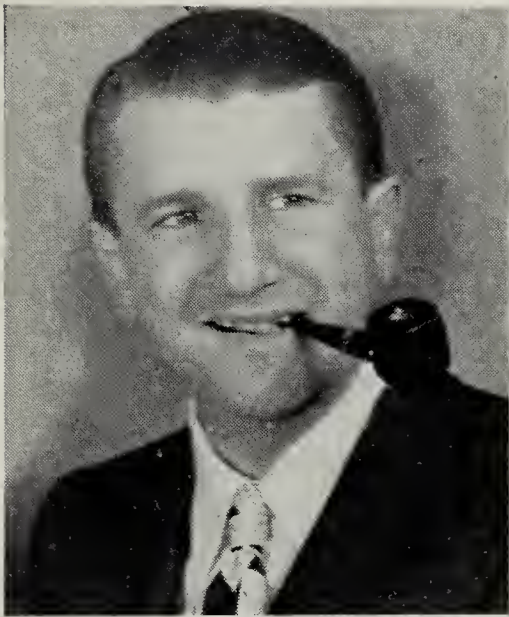
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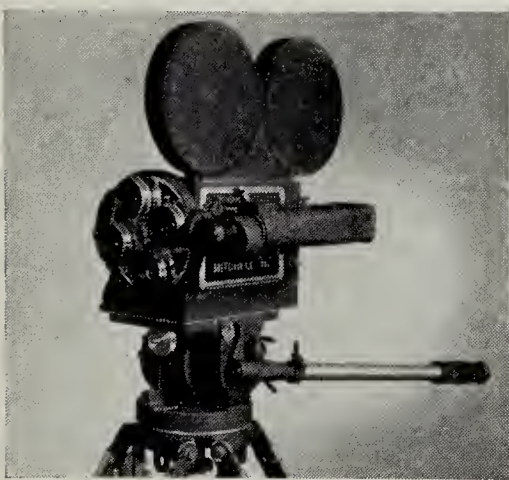
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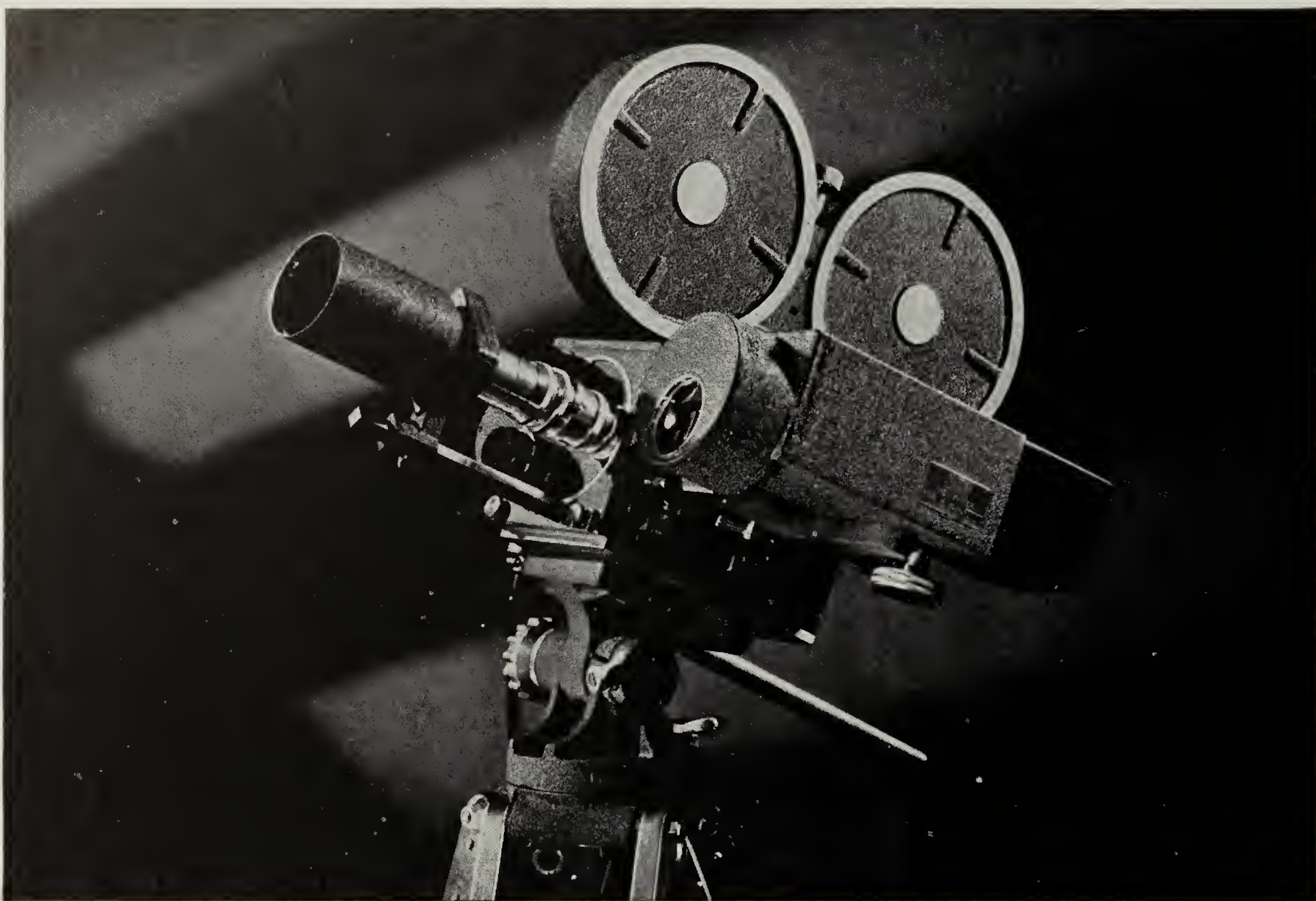


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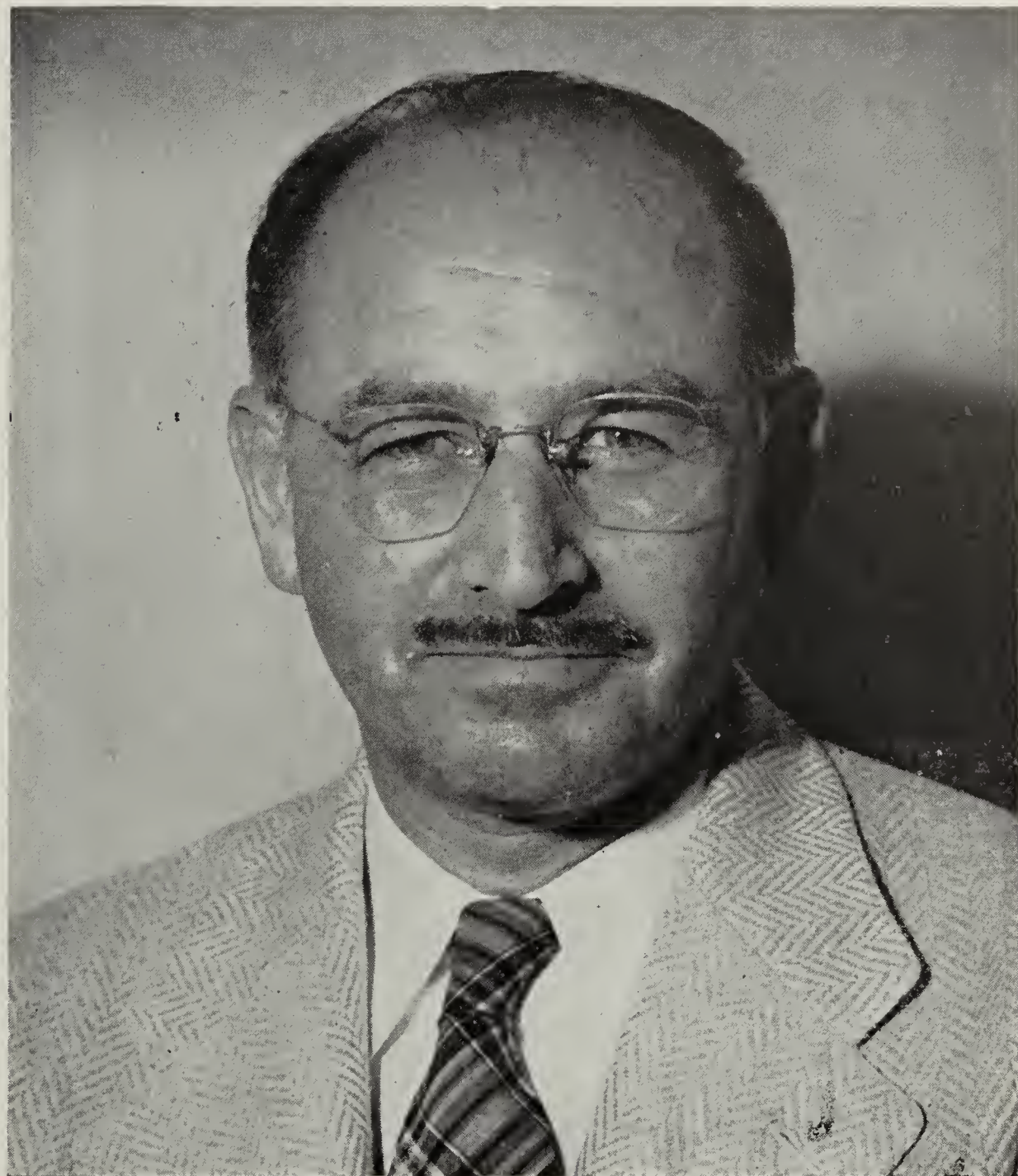
LESTER WHITE is sorry he has never used his middle initial. He has a middle initial. It's "H". And perhaps it stands for a name generously bestowed by doting parents, and known only to intimate members of the family who refer to it in moments of extreme gaiety on festive occasions when paper hats are being worn. But this is only surmise. We don't know. We do know that many a blooming friendship has been blighted by too much curiosity being exhibited about the name hidden behind a middle initial. We also know that Lester White has never used his.

If he had he might have saved himself some embarrassing moments. Such as the time the district attorney called him in to ask him why he had been writing checks on a bank in which he had no account. Very embarrassing, until Les was able to convince this muscle in the arm of the law that there must be, in fact was, another Lester White. Or the time the Internal Revenue boys, who always get their man, even if he's the wrong one, hauled him up and with superior smiles asked him why he had not declared a certain \$10,000.00 they knew he had earned and which he had failed to declare on his Income tax return. Flattered of course, but accustomed by this time to fighting the injustices of mistaken identity, Les wanted to know where he was supposed to have earned this money. "Eddie Cantor gave it to you," said the agents with the air of those to whom nothing is hidden. "For what?" asked Les. "For writing!" they answered. And Les swears he heard the clink of the cuffs as they moved towards him. "Ha! ha!" countered Les. And to this day he doesn't know why he said, "Ha! ha!" at just that moment. "That must be Lester White the writer. He worked for Cantor. And he lives in New York. And that's undoubtedly where he filed his declaration." The revenooers exchanged glances in which frustration was not unmingled with chagrin. But virtue had triumphed once again for Lester.

Then there are the stories that can be told about the hilarious mix-ups resulting from having the same name as a truck driver with a penchant for purchasing expensive items on time payments, and who never knew what time it was. But funnier still is to hear about the repercussions that come from our Lester having a namesake in the used car business.

It seems that the second-hand cars bought from the automotive White have a nasty habit of breaking down in the middle of the night, whereupon the irate purchaser quickly thumbs through the telephone directory, and finding only one Lester White listed, calls our Lester and wants to know what the — he's going to do about it!!

Explaining to these people whose investment in transportation has fallen so much lower than their expectations that they have the wrong Lester White proves fruitless and only adds to their



ACES of the CAMERA

LESTER WHITE, A. S. C.

By W. G. C. BOSCO

conviction that they have been hornswoggled and generally mistreated. So, like any good cameraman accustomed to taking script changes in his stride, Les quickly developed a solution to the problem that never fails to click.

"I'm so sorry," he tells the irate motorist. "Something must have gone wrong." While the guy with the beef stops to ponder the profundity of this bit of understatement, Les continues: "I tell you what you do. You call a cab, charge it to me, and go home. I'll have your car towed in and make all the necessary repairs without any expense to you." The motorist, believing the war must be really over, beams his appreciation and hangs up. Lester White, A.S.C., sighs and goes back to sleep.

And there's more of the same. But why go on? We feel sure we have shown sufficient reason to prove why Lester

White is sorry he has never used his middle initial.

Les is a very resourceful man. Perhaps it's his Brooklyn background. Anyway, it was as a boy in Brooklyn that he first used his resourcefulness to climb a fence and watch the early movie makers of the old Vitagraph Co. And what he saw behind the scenes in Flatbush so intrigued him, and occupied so much of his time, that his family decided to separate him from all that nonsense and send him off to Cornell University.

Now, as everybody knows, Cornell University is situated in that nice, quiet little up-state New York town of Ithaca. But what most people fail to realize, and it certainly escaped the notice of Lester's parents at the time, Ithaca was the home of the Wharton Brothers Film Studio; producers of serials destined to become

(Continued on Page 334)

The Camera and Production Value

By Herb A. Lightman



IN PROFESSIONAL film circles, the term *production value* conveys certain connotations of lavishness which motion picture critics like to translate into superlatives such as "gigantic," "colossal," and "stupendous." Reviewers for film trade papers consistently speak of this picture or that as having great *production value*. What they usually mean when they speak thus of a film is that the settings, costumes, crowds of extras, and star-studded cast look as if they cost a lot of money.

Actually, the expression is somewhat more elusive to define than this example would indicate—for it represents an overall impression of quality conveyed by a sum total of the elements that go into production. This impression does not necessarily depend upon how much money was spent on the picture; in fact, the effect is all too often exactly the opposite.

Many producers feel that money freely spent cannot help but insure the quality of the picture. With this idea in mind they pour millions of dollars into the etching of an image on a strip of film, feeling sure that the audience will take the picture fondly to its collective bosom. That audiences do not always respond in this way is a matter of coldly statistical fact, for some of the costliest films have been the most resounding flops.

When one stops to reflect that American audiences go to the movies to gain a stimulating, if vicarious, emotional experience, it should be evident what elements are most effective in gaining approval for a specific film. These elements include a good story, strong direction, and effective camera work—but they do not necessarily include spectacular settings, extravagant wardrobe, or the inevitable "cast of thousands." Rather, an overabundance of such factors serves only to clutter the film and prevent its impact from registering fully upon the audience.

Our audiences have a right to expect their films to be well-mounted, for certainly Hollywood is the acknowledged world leader in technical cinematic achievement. Yet there is no need to make the mounting of the film an end in itself, for in the final analysis, the trimmings of a picture should serve to enhance the story and keep the continuity moving ever forward.

Granted that a film has a good script, capable actors, and an efficient production crew—the resulting picture still depends upon the *presentation* of these

elements for the generally good, bad, or indifferent impression it creates when flashed upon the screen. It is for this reason that the *photography* of a photoplay is so important—for it is the camera through whose eye the story is actually presented.

The camera cannot, of course, compensate for a poor script or faulty direction; but it can do a great deal to impart quality to a picture that might otherwise be merely adequate. In the same way, unimaginative camera work can detract from the most expensive and lavishly mounted extravaganza.

Looking back at such highly artistic and equally popular films as "The Informer," "Rebecca," "Kings Row," "All That Money Can Buy," "Grapes of Wrath" and "The Long Voyage Home," we find that none of these films could be termed an "extravaganza." There were no breath-taking sets, no casts of thousands, no gigantic, colossal, or stupendous effects calculated to transfix the audience. Yet each of these films bore the stamp of quality, plus an atmosphere of richness in presentation—an effect which in almost every case can be traced to a combination of intelligent set design and outstanding camera work.

Considering *production value* from the standpoint of the camera, we find that the director of cinematography has three elements with which to work, in addition to the actual physical equipment which he uses to expose the film. These elements are: lighting, composition, and camera movement—and the way in which he uses them accounts for the quality of the final photographic result. Imagination and careful pre-planning are two factors that help the efficient cinematographer to get the most from the equipment he is using. Often he is thrown onto a picture a day or two before shooting begins, and he does not have adequate time to prepare all of his effects. In this case, the film is bound to suffer photographically to a greater or lesser degree.

But where the cinematographer is given his script in advance and has time to plan it carefully, he can work out patterns of lighting, composition and camera movement that will present the story on the screen to best advantage, and at the same time convey an impression of greater *production value*.

Taking the three photographic elements one by one, we can see how each contributes to the quality of the final result. *Lighting* is perhaps the most im-

portant single factor, for light is the medium with which the cameraman "paints" the film. In a cheap picture, flat, unimaginative lighting is generally used, because that is the quickest and least expensive way to light a set. The result, however, *looks* cheap on the screen. If the cinematographer on a picture of this type were given sufficient time to study the script, the settings, and the action to be filmed, he could work out a lighting pattern with depth, modelling, and richness—and the resulting film would show a good deal more quality on the screen.

Similarly, *composition* is an important factor that is often neglected both in high and low budget pictures. Good composition amounts simply to putting the dramatic emphasis of a scene in its proper place. The top-notch cinematographer achieves this result by making sure that the lines within his frame, the perspective of the camera angle, and the pattern of movement on the screen—all lead toward the focal point of the action. Again, pre-planning allows the cinematographer to chart effective composition, so that he is not forced simply to plank the camera down and shoot every scene from a straightforward, undramatic angle.

Our third factor, *camera movement*, is usually thought of as an "expensive" element, since moving camera shots take more time to set up, rehearse, and film. This seeming extravagance is, however, balanced by the fact that it is often possible to lace together by means of camera movement as many as five scenes that would otherwise require separate setups. Certainly smooth camera movement, correctly motivated, is a device that adds fluent quality to a photoplay and carries the story forward.

Producers of low-budget films have economized by engaging mediocre talent to place a mediocre story on the screen within restricted number of shooting days. The result was almost always a mediocre film—but the system has flourished because the double-feature policy demanded a constant flood of good, bad and indifferent product in order to fill the exhibitors' schedules. However, present-day audiences are more critical than they used to be, and are now prone to criticize technical shortcomings as well as dramatic faults in a film.

In production ranks this trend has inspired two reactions. Firstly, several of the major studios have announced the intention of making only "A" pictures in the future, thus falling back on the

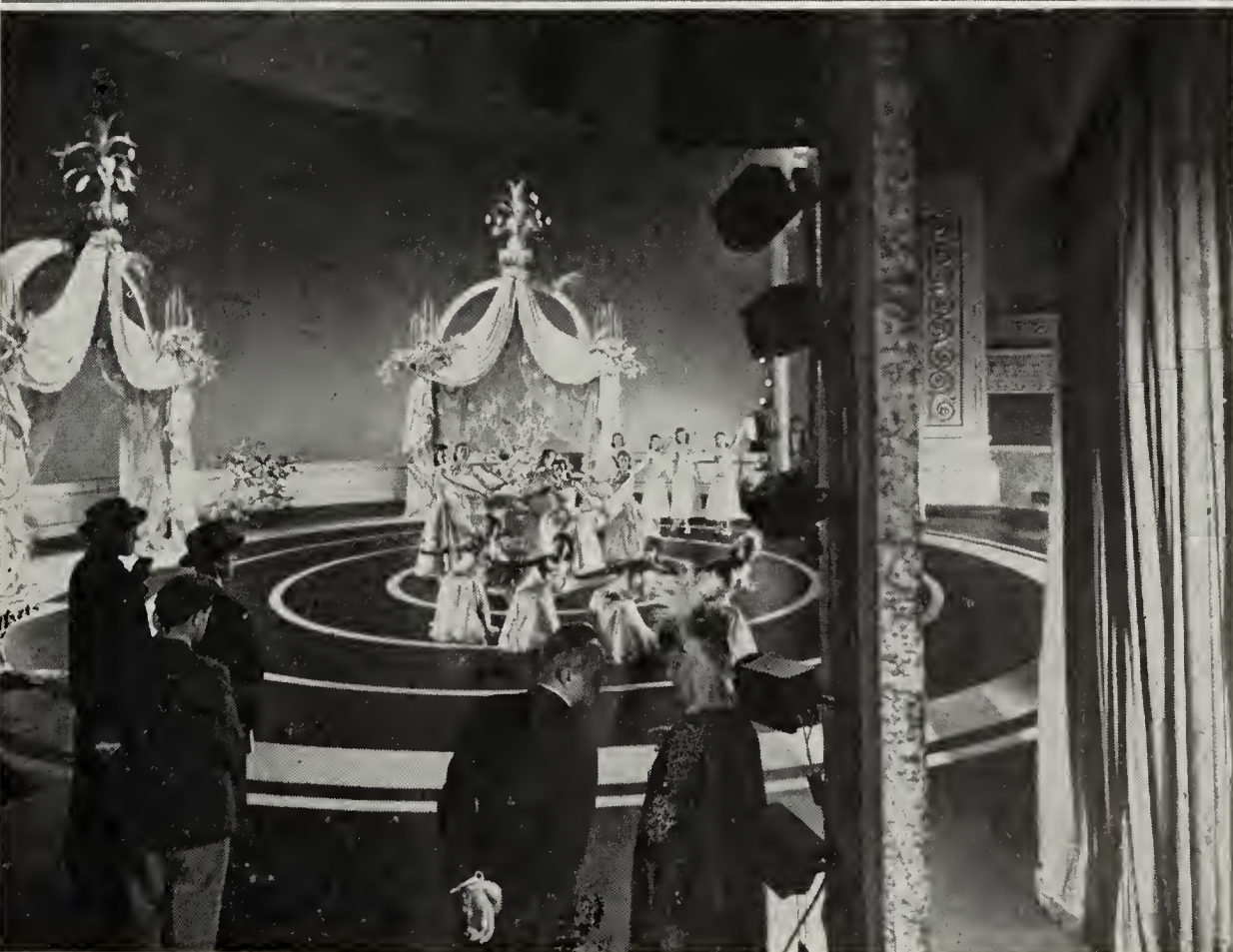
Simple, yet forceful, set design—plus a kinetic camera treatment—succeeded in producing an atmosphere of top quality in the presentation of "Specter of the Rose." Low-ceilinged sets, such as in the scene at right, were typical throughout the film—creating a lighting problem, but allowing for dramatic low angles.



Director of Photography Lee Garmes, A. S. C., relied strongly upon source lighting and clean-cut patterns of composition to project force into the photographic treatment of "Specter of the Rose." Simple, direct approach, as in this scene, gives the film a continental richness.



The backstage atmosphere of "Specter of the Rose" was enhanced by showing the ballets from a completely backstage point of view. Simple settings in this sequence conveyed an impression of great production value because of the richly graphic style of lighting used.



faulty *more-money-more-quality* line of reasoning. Secondly, and much more significantly, certain low-budget producers have decided to engage top-notch talent and to save money by intelligent pre-planning to cut down wasted time in production.

Typical of the latter healthy attitude is a new film, "Specter of the Rose," which is now in national release. This picture is the brain-child of ace-scenarist Ben Hecht who, tired of turning out commercial screenplays for filthy lucre, decided he wanted to put something artistically superior on the screen. He wanted, he said, "to make an adult picture for adults, not for the 11-year-old intellect that most producers cater to."

This attitude, of course, was in itself revolutionary, since the success of a film invariably depends upon mass attendance at the box office—that mass being composed of a great majority of 11-year-old intellects. Financially, the picture represented a decided gamble because it violated all the rules of commercialism. There were to be no stars, no lavish sets, no kiss-punctuated happy ending.

Hecht broached his idea to several studios, most of which were afraid to touch it. Finally, at cowboy-infested Republic Studios, he was given a sympa-

thetic hearing. The powers-that-be, happily dazed perhaps by Hecht's status as Hollywood's foremost screenwriter, agreed to allot to his production the staggering sum of two hundred thousand dollars, an amount just about adequate to pay for a backdrop at one of the major studios. The salaries of several of the top technicians were to be paid on a percentage basis from the receipts of the film.

Far from being stymied by this low budget, Hecht was jubilant about it. "As soon as you start spending big money on a picture," he observed, "it is taken out of your hands and put into the public's. They cast it for you and dictate what should go into it." Actually costs had to be held down, because the picture was admittedly slanted, not for the huge mass audience, but for a relatively small, decidedly highbrow segment of the movie-going public.

Closely associated with Hecht as co-producer and co-director of the film, as well as director of cinematography, was top-cameraman Lee Garmes, A.S.C., whose name on a credit list automatically spells *quality*. Garmes had worked with Hecht before, had shot almost all of his previous pictures, including the artistically triumphant "Crime Without Passion" and "The Scoundrel." The two men agreed that only the best techni-

cians were to be engaged for "Specter of the Rose."

This announcement brought forth bewildered yelps from the front office. "How," they wanted to know, "can you buy the best technicians on a budget that ends almost before it begins?" The answer was simple and direct. Producer Hecht explained that instead of taking three months to shoot the picture in the usual leisurely manner, everything would be so perfectly pre-planned and rehearsed that it could be shot in three weeks; time would be the saving element. On this basis the budget could stand the salaries of top technicians hired only for the short period of actual shooting. As a result, all of the technical men working on the film were of the highest caliber, and they were actually paid *more* than they had been accustomed to receiving.

The system worked beautifully. Each technician felt a sense of responsibility toward the film. All along the line there was *teamwork*, an element notoriously lacking on most Hollywood sound stages. Creative artists were given free rein and placed "on their honor" to hold the production to its budget. For example, art director Ernest Fegté, considered an expensive man as art directors go, was given a budget of \$22,000, with which to construct 19 sets. When costs were tallied, it was found that he had held his budget to a scant \$17,000, for sets, designed and executed within the record time of 12 days.

In line with his determination to place a high quality of *production value* on the screen, Garmes arranged to use one of the latest type cameras owned by the Selznick studios. He plotted all of his camera angles and lighting set-ups several weeks before the picture went onto the sound stages, so that he had every technical detail perfectly in mind before a camera turned.

Meanwhile, director Hecht was busily pre-rehearsing his cast. They rehearsed for weeks in the most improbable places: in taxi-cabs, in bars, at lunch, at dinner, wherever they happened to be. By the time shooting was to begin, each actor knew exactly what he had to do in every scene. There was no indecision, no waste motion, no costly retakes. Because of these pre-rehearsals the picture could be *undershot* instead of being *overshot* as is usually the case. Rarely were more than two takes made on a scene, whereas in the average picture anywhere from 4 to 15 takes per scene is the rule.

Lee Garmes' position as co-producer and co-director as well as director of cinematography allowed him free rein in working out his camera treatment. On the average film, the director tells the cameraman where to place his camera and what effects are to be achieved. But in "Specter of the Rose" the camera set-ups and angles were completely Garmes' responsibility. No one interfered with him or dictated what he



The climactic sequence of "Specter of the Rose," in which the crazed dancer executes a weird dance of death before leaping through the window to his death—is characterized by dramatic low-key lighting and forceful camera angles.

(Continued on Page 339)



Members of the A. S. C. who participated in the preparations for, and the actual motion picture photography of, Operations Crossroads—both the airdrop and under-water atom bomb tests at Bikini. Standing (left to right): Paul Perry, Tom Tutwiler, Major Gilbert Warrenton. Kneeling: Harry Perry and Lloyd Knechtel.

Photographing the Underwater Atomic Bomb Test at Bikini

By LLOYD W. KNECHTEL, A. S. C.

(Editor's Note: Only through motion picture photography were the recent atomic bomb tests in the Pacific registered permanently for study by scientists, Army, Navy, and Air Force high commands; and for partial exhibition before the public. The entire project was planned down to the most minute detail, with special emphasis on the safety of the personnel engaged.)

Early this year, when Operations Crossroads was being set up, A. S. C. members who had previous military photographic experience were solicited to join the project either with former military rank or civilian status. Those

who volunteered for the assignment included: Major Gil Warrenton, USAAF, Harry Perry, Paul Perry, Tom Tutwiler, Lloyd Knechtel, and Art Lloyd. The latter was in on the preliminary preparations, but had to return to Hollywood for a prior picture commitment. The others remained for the two atomic bomb tests in the Pacific—with pride in intimate participation in one of the most stupendous events in world history.

Because of restrictions still in effect, Lloyd Knechtel has been able to only generalize on the underwater atom bomb test—but it's most interesting reading.)

BOTH the air drop test and the underwater test of the atomic bomb in the South Pacific are now past history, insofar as the current news values are concerned. History—and the extensive film record obtained in each instance—will more correctly evaluate the accomplishments of the two inter-related projects which will have a terrific impact on world peace for the future. Only by comparison is it possible to evaluate the difference between the above-water and below-water bomb detonations from a photographic angle.

From the scientific point of view, much

knowledge was obtained from both tests. However, the second—and under-water—explosion of the atomic bomb was an unknown quantity, and only by the widest imagination was it possible to foretell what would happen in that particular instance.

We photographers at Kwajalein and Eniwetok—whether Army, Navy, civilian, from Wright Field, or recruited because of past war experiences—were all highly keyed up to photograph something that the world had never seen before.

Extensive Advance Training

We had all gone through intensive training and briefings before A Day—both at Roswell, New Mexico, and at Kwajalein. What to do in case we had to bail out and jump by parachute if flying at high altitudes—how to take care of ourselves if and when we hit the water—special shark repellant to release—how to get into rubber dinghys when in the water—and a hundred and one things for our personal safety.

Safety was the one angle stressed on this project and the Army Air Corps should be proud of the record on Operations Crossroads—only one accident—a Captain Bishop who was armaments officer, and who loaded the Hiroshima and Nagasaki bombs—was killed when he accidentally walked into the propeller of the bombing ship “Dave’s Dream” one week before A Day. It was a great record, no planes or personnel lost while the planes were in the air on missions over Bikini—and there were many test missions. Daily routine was up at 2:30 a.m. from our Quanset Huts—shave and a shower—breakfast by 3:30—at stations with our crews by 4—turn over the props—pre-flight inspections by 5—and takeoff between 5 and 6 a.m.

Cameras Everywhere

On B Day (the underwater atomic bomb display) the same number of planes were used as photographic ships. At Kwajalein there were two converted C-54’s—with cameras peeking out of every conceivable position for both motion pictures and stills. There were Mitchells, Eyemos, 16 mm. color and black-and-white—special high speed cameras, the Jeromes and Fastex cameras with prisms instead of shutters that photographed up to 8,000 frames per second. Many of the Mitchells photographed at 96 frames per second in both black-and-white and Technicolor monopack.

There were eight converted B-29’s known as F-13’s that were also bristling with lenses—in the nose, in the blisters and in the tail positions and bomb bays.

Drone Camera Ships

At Eniwetok the same number of photographic planes were utilized as on A Day—four B-17 mother ships and four baby ships, or drones, controlled remotely by radio from the mother ships. It was a thrilling sight to take off in a mother ship—circle around a few times and come in low over the runway to pick up the baby after the radio-controlled jeeps had taken them off and put them in

the air just ahead of you. After being airborne, the mother ships then took over radio control from the jeeps and controlled the drone to the target—guiding the latter through the atomic cloud a few minutes after the blast—and bringing it home to base where the radio-controlled jeep then brought the drone down onto the runway for a landing.

The B-17’s had various motion picture and still cameras aboard. On the drone planes the cameras were operated by remote control from the mother ships. The Army Air Force, to my knowledge, is the only Air Force in the world to have perfected the handling of drone planes so adroitly and efficiently. The recent flight of drones on Operations Remote from Honolulu to Muroc, California, is further proof of this point—a very long flight with no personnel aboard in the drones over a great distance.

B Day Easier Operation

On B Day the air photographers had a much simpler problem in contrast to A Day. On the first atom bomb drop display, we were ordered to wear very dark glasses to protect our eyes from the brilliant flash that would come with the explosion—many times the intensity of the sun. We had to set our cameras at a pre-determined position and hope for the best because it was almost impossible to see through the dark goggles.

Also there was the element present of the human error on the part of the bombardier who dropped the bomb. Many cameras were using long-focus telescopic lenses at the time, so our problem can easily be visualized. In contrast, on B Day we knew exactly where the explosion would occur; consequently we did not have to worry about the flash, and no dark glasses were required.

Atom Bomb Away

At exactly 8:35 a.m. to the second on July 25th, the underwater atom bomb was detonated—and a more spectacular sight I have never seen before—a huge column of water shot up, climbing to an altitude of between 7,000 and 9,000 feet—shaping like a gigantic cake as it grew. The shock wave seemed to change the entire picture by each second, forming billowing clouds filled with atomic energy. A very short time after the blast occurred the shock wave hit us in the plane—varying at our distance away from the actual time of the explosion. It hit us with a resounding crack—much stronger than A Day—and some planes received more severe jolts than others—but it could not help but remind all of us of the terrible power behind the atomic bomb. The atomic cloud soon covered the entire area of the target array of ships, blocking it from view. If you were fortunate enough to have seen the newsreel clips, you witnessed the complete spectacle before your eyes much better than I could ever describe it to you. The USS Nebraska had disappeared. The gallant old Saratoga was sinking, and many other minor ships were completely out of commission. The Jap

battleship Nagato sank during the night, and all we could see the next morning was a series of bubbles and oil coming up next to the Nevada which survived both atomic blasts.

Radio Activity Had To Settle

It was several days before the radio activity had settled down sufficiently before the ships of Admiral Blandy’s fleet could enter the target area. The advance ships nosed alongside and—with water from fire hoses—sprayed the decks of the objective ships before the latter could be boarded. Special Geiger counters were used to check the safety of boarding for survey of the bomb damage. Radio activity is an amazing thing—you cannot see it or actually feel it (unless you get too much—then you may die).

Photographic Planes Through Atomic Clouds

On both A and B Day, photographic planes and their crews went through the atomic clouds. Obviously, in both instances, the drone planes came back “red hot.” Yet our cameras had to be unloaded from the planes immediately after landings. On each plane, other than the drones, there was a technician with a Geiger counter. On A Day our F-13 camera plane got into the atomic cloud and could not get out of it for more than five minutes—the Geiger counter doing handsprings all the time—and the technician shouting, “Let’s get the hell out of here quick!” The radio-activity, however, fortunately seemed to cling especially to oily sections of the motor, hydraulic systems, etc.

Minor Drone Mishap

The only mishap on B Day of minor nature, occurred with the drone we were controlling from the mother ship I was flying in. We brought the drone successfully through the atomic cloud a few minutes after the blast and immediately picked it up for steering home to Eniwetok. It was landed successfully, but on taxiing down the runway, it became evident that the brakes were out of commission. The drone continued to the end of the runway and beyond, ending up in the drink—but the Air Corps soon pulled it out of the water, made necessary repairs, and had it in the air again for its flight back to the United States.

History-Making Experience

It was all a great experience, and I am certain that much valuable and scientific knowledge was gained by the Manhattan District. With the United States Army and Navy cooperating to the utmost, it will stand in history as one of the greatest demonstrations and shows of all time in the propaganda for peace in this world.

Lindfors Now B&H V. P.

E. S. Lindfors has been elected a vice president of Bell and Howell Company, and will headquarter in the firm’s New York offices. He joined the company 10 years ago, and has been a travelling representative and district manager.

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HOLLYWOOD

THE COST of producing a 16mm. subject professionally should be less than a 35mm. production in direct ratio to the difference in the size of the frames. Most certainly it is logical to assume that a smaller picture will cost less—or is it?

The foregoing type of illogical reasoning is all too familiar to the professional 16mm. cinematographer. While it is seldom stated in so many words it is often forcefully indicated in budget meetings by direct action. Unfortunately the camera will not rationalize to a cost sheet as some producers are prone to do and if the cinematographer is forced to compromise with an inadequate budget and insufficient equipment the finished product will not be of professional quality.

The secrets of Hollywood's success in keeping the title of "The Motion Picture Capitol of the World" are based on talent and material which has cost untold millions of dollars to accumulate.

Carbon Arc Lighting For 16mm Color Production

By ALAN STENSVOLD, S. S. C.

It is to take advantage of this equipment and knowledge that is bringing producers of educational and industrial pictures to Hollywood. If they obtain the quality of product they desire at a less cost than entertainment subjects it will be because they do not have to pay for stars; not because they will be able to operate successfully on the basis of *the smaller the frame size the less the cost.*

Professional 16mm. production and color are almost synonymous at present.

The industrialist not only desires pleasing flesh tones, but he must have accurate color reproduction of labels, trademarks, advertising, and the color must be constant whether the shot is an exterior or an interior.

If the interior of his factory is shown he does not want to see a flat, dimly illuminated foreground with only a weak suggestion of detail in the background. He wants to see his idealized version which is actually much clearer than the place appears to the eye.

At first thought it may seem that if a manufacturer wishes a clear long shot of the interior of his factory that all of the equipment in Hollywood will be of no value unless it is transported to the location. Quality professional color photography requires carbon arc lamps and a rather high level of illumination regardless of whether the picture is produced in Hollywood or Detroit.

While it may not be practical to transport sufficient arc lamps and generating equipment to adequately illuminate the interior of a factory for an establishing long shot, it is practical to carry along enough equipment for the foreground action and booster lights.

Because the carbon arc lamp matches sunlight the two may be used together with sunlight as the main source through windows and skylights and the available arc lamp equipment to "boost" sunlight by illuminating the dark areas. In other cases the factory may be transported to Hollywood in effect by photographing it in miniature, or by other process methods.

This use of talent and equipment which has been assembled for the production of 35mm. motion pictures makes it possible to produce high quality 16mm. pictures without the necessity of developing techniques by slow and costly methods.

In the production of 35mm. color it was learned that sunlight, or white light, balance is essential. White light, being composed of equal quantities of the light primaries, blue, green and red, is a natural source for a process designed for true color reproduction. Only with white light is it possible to use the same camera set-up for interiors as on exteriors with the assurance that flesh tones and costume colors will match. Is there any reason to assume that this is not also true of 16mm. merely because the frame size is smaller?

As a matter of fact white light is more essential for the production of 16mm. color, where multiple layer film

(Continued on Page 332)



SHADES OF PAST MOVIE HISTORY. John Lund ready for a scene in "Perils of Pauline," Paramount Technicolor production starring Betty Hutton as the inimitable Pearl White, early serial star. Director of Photography Ray Rennahan, A. S. C., is kneeling in front of the camera, while Director George Marshall is seen beside camera.

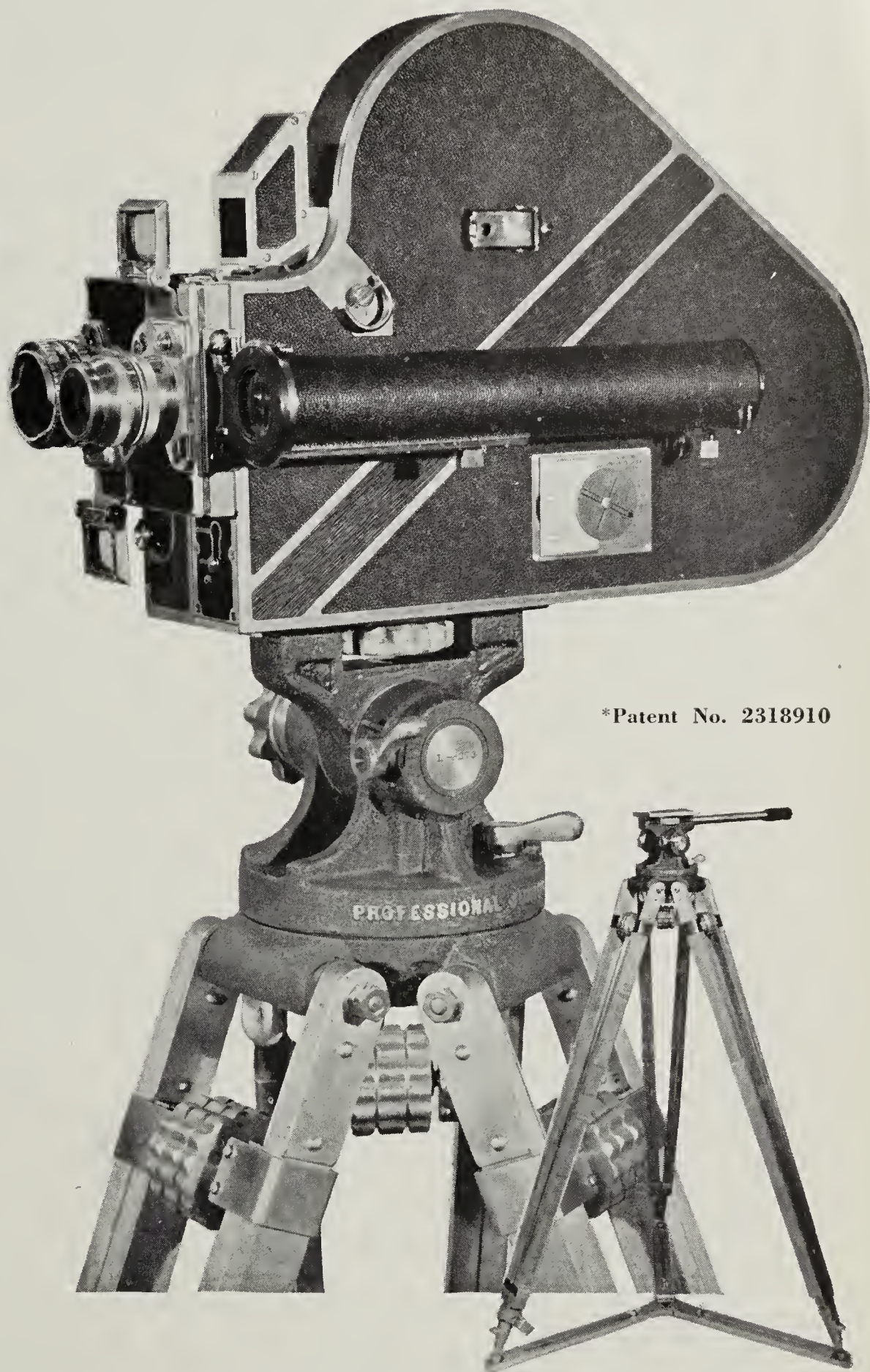
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tripod

with

removable

head



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The friction type head which is unconditionally guaranteed for 5 years, gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our 'Hi-Hat' low-base adaptor or Baby "Professional Junior" Tripod base. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

The standard size tripod base is sturdy. "Spread-lag" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest.

The new "Professional Junior" Baby Tripod, shown ready for the Removable head, weight 5½ lbs., is made of Aluminum with Dural legs having spurs. Extended height—21 inches, depressed—16 inches. It's compact and sturdy. Quality throughout.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

LET US SAY that we have decided to film a picture. We have already selected our *cinematic idea* and have transposed it into a *theme*. Using the theme as a nucleus, we developed a *synopsis* of the story, which we then broadened into a *treatment*, which in turn became a *scenario* or *shooting script*.

This particular pattern of planning is based on general professional studio procedure, but (as we have pointed out in previous articles) it can also provide a plan by means of which the advanced amateur or semi-professional can make better pictures.

So, let us say, then, that we now have our scenario complete and approved. It is a working blueprint of the picture we are going to make. What is our next step? Shall we rush right out with camera and film and start grinding off footage? Unfortunately it is that very sort of thing that happens all too frequently in semi-professional production. A film-maker often spends a good deal of time and effort turning out a good script only to nullify the effect in actual shooting by ignoring one important step in preparation; that step is the process known as production planning.

Why Production Planning?

It is rarely, if ever, that a good film "just happens." Almost always, a picture worth seeing on the screen is the result of a good deal of hard work, most of which must be done before a camera starts grinding. In order to best accomplish this preliminary preparation for shooting, the film-maker should constantly visualize the production in its overall form—not merely as a collection of fragmentary scenes that can be haphazardly shot and spliced together.

Actually, *production planning* in one form or another is as essential to the home movie as it is to a feature-length commercial sound film. Naturally, the more involved the story, the more thorough this phase of planning must be.

Careful preparation will give the resultant film a general smoothness plus a unified approach, so that appearing on the screen it will seem to have been designed and executed by one creative mind, even though many technicians may actually have had a part in the filming. In addition to this individual "touch," pre-planning assures consistent continuity and a minimum of wasted expense, effort, and time. This latter item is no small consideration, for time on the set is important. It should not be wasted by making a full cast and crew wait around while issues are decided that should have been settled on paper long before the picture reached the shooting stage. At best, certain unforeseen delays are inevitable—but a good deal of expensive time-waste can be avoided by intelligent pre-planning.

The producer of the film should become thoroughly familiar with his script before shooting begins. He should know every scene and sequence, its content

and requirements. He should know just how each bit of action is to be staged, plus the effect it is calculated to have on the audience. He should literally *live* with that script before he starts to shoot. With this approach he will be able to produce the film for the most observant members of his potential audience, and thus gain the best possible reaction.

The Preliminary Conference

The first step in *production planning* is to call together for a preliminary conference all of the technicians who are to participate in the shooting of the picture. The purpose of this conference is to set up certain basic standards of operation, to familiarize everyone with the approach and technical requirements of the script, and to anticipate any problems that might arise later on.

This conference should be an informal sort of affair with the producer or director reading the script aloud to his technicians, explaining it as he goes along and answering any questions that they might have. It is advisable for all present to make notes of any ideas they may get while the script is being read.

When the reading of the script has been completed, the producer should then explain to the group what approach or *slant* he has in mind for putting the story on celluloid. He should ask for their suggestions and encourage any ideas that will make the picture more effective in any way. It is only a second-rate producer whose pride will not allow him to recognize and use good suggestions submitted by others, merely because he himself was not the originator.

It is during the preliminary conference that any obviously impractical features of the script can be thrashed out and revised. Far better to do it at this time than to try to correct the mistake after the sequence has already been filmed.

Production Breakdown

After the conference, the producer and his assistants should be ready to make the *production breakdown*. Actually, this amounts to dissecting the script into its separate scenes and sequences in order to estimate costs, set up a *shooting schedule*, and determine the requirements of each scene in terms of cast, props, locale, etc.

The Cinema Workshop

3. Production Planning

By CHARLES LORING

The director and the cameraman should go through the script scene by scene, discussing each camera set-up and determining how it is to be executed. They should know in advance of shooting just exactly what each set-up is and how, when and where it is to be filmed.

Simple scripts of the home movie variety can usually be shot in sequence without undue trouble, since such stories are relatively uncomplicated and take place in a confined locale. But when a more intricate feature, either photoplay or commercial, is to be shot, it is usually a good idea to group the scenes for camera angle, locale, cast, etc.

For an obvious example, let us say that scenes 2 and 82 both take place in the same locale, one that is a good distance away. Obviously, instead of making two different trips to that location as the scenes came up in sequence, it would be more convenient to shoot both scenes at the same time, even though they were to appear at widely separate points in the story. Similarly, if certain cast members were to be shown in scenes 5, 43 and 102, it would be more logical to shoot all these scenes together, if possible, than to call the players back at three different times, or keep them waiting around during the entire filming.

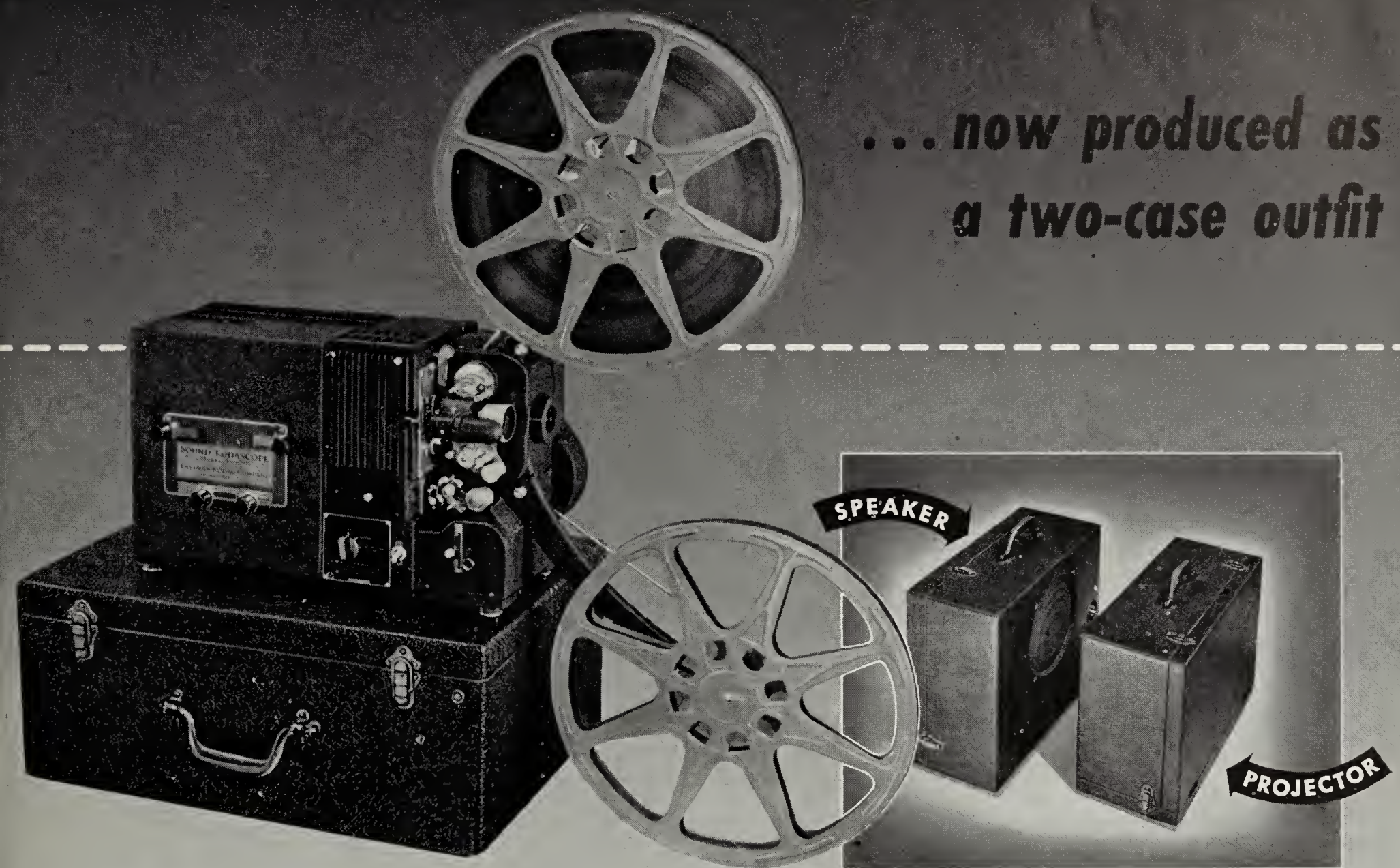
The most ambitious step in breaking down a production that is at all involved, is to prepare a separate *dope sheet* for each scene. On this sheet would appear in separately ruled spaces, the locale, cast required, whether interior or exterior, lighting set-up, props, costumes, special effects, etc. It is even advisable to include a diagram of the camera angle, or a rough sketch of the composition of the scene as it is to appear in the frame. Also on this sheet, spaces should be left to fill in during shooting the running time of the scene, exposure used, and any other technical data concerning the scene.

Having made the *breakdown*, the producer is then ready to set up a *shooting schedule*. Grouping his shots for maximum efficiency, he estimates how long it will take to shoot each scene. In doing so, he takes into consideration the manner in which his technicians work on the set as well as unforeseen hold-ups that may delay shooting. He will also

(Continued on Page 336)

Sound Kodascope FS-10-N

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The Fidelity Control, a built-in feature of Sound Kodascope FS-10-N, enables precise focus of the scanning beam. The result—finest tonal quality from any sound film, original or "dupe"—and this is but one of many "FS-10-N" features that make for better screenings under the widest range of projecting conditions.

Sound Kodascope FS-10-N, the single-case sound *and* silent 16mm. projector introduced during the war—the "N" in FS-10-N stands for "Navy"—is now being produced as a two-case outfit.

One case holds the speaker, Cordomatic connecting cord, 1600-ft. take-up reel, power cord, and extra lamps. The other, the projector itself. Just about everything needed for showings, sound or silent, has a place in one of the carefully designed cases.

Another new note: Both the projection and condenser lenses of the "FS-10-N" are coated . . . Lumenized . . . for maximum screen detail and illumination.

Better see your dealer about this superior, yet reasonably priced projector. As with all good things, unfortunately, the supply of the two-case "FS-10-N" will be limited for some months to come.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Kodak

High Fidelity Sound Printing For 16mm. Films

By LLOYD N. CHRISTIANSEN
(Research Engineer, Telefilm)



TO EVERY producer of 16mm. pictures a good sound track is second only to the scenes it enhances. It carries the thread of thought behind the picture, weaving the multitude of shots into a powerful medium of influence, information, or entertainment. The use of direct recording onto 16mm. film for the past 10 years has become the best practical way for the majority of producers in this field to add sound.

Telefilm, Inc., of Hollywood, one of the pioneer all-16mm. studios, succeeded in recording excellent sound as early as 1936 sufficiently broad in sound range to carry on with regular productions, under full assurance of dependable duplication to Kodachrome, by contact printing. Highly specialized recording equalization and film processing produced good sound, despite the heavy grain structure of the recording film stock, plus the low speed of 16mm. film travel.

Later improvements in recording stock made it possible for the engineering staff to make original recordings approaching closely the useful range of the 35mm. release prints, with their physical advantage of greater film travel speed. This appeared to be the missing link to matching accepted 35mm. standards with 16mm. film, if it were only possible to make prints from such a high fidelity track.

Closer examination of prints made in the conventional manner, however, revealed that a great ravine was yet to be crossed before 16mm. sound was to equal the theater quality which the public had grown to accept as near perfect. To add to the importance of clearing up this critical printing problem, was the realization that at least one manufacturer had extended the range response of a 16mm. projector sufficiently to partially take advantage of the hoped-for new standard in over-all sound quality.

Research on the problem was given high priority at Telefilm, and all known methods of sound printing were studied to see if a simple, high definition method of transferring the sound image from one film to another could be developed.

It became obvious that two principal factors comprised the great cavern down which these newly captured overtones of sound were tumbling into silence. They were *film slippage* and *image flare*.

Film slippage was perhaps the greatest offender. The shrinkage of the original sound track acetate base film reduces its length below that of the new raw stock against which it must press, on its travel through the contact printer. The sprocket perforations in the two films to be passed through the printer do not match under such conditions, and the films travel past the exposing light in a more or less lumpy movement, causing the new undeveloped image to "smear."

Conventional printing equipment, combined with the new wider range 16mm. recording, produced a distorted ripple in the overtone range of music and voice. The sprocket perforations in the film stock jostle forward and back, in their effort to equalize their inherent difference in length, between sprocket holes. This movement between the films is much like snapping the shutter of a camera when it is not perfectly still. A blurred image is the result.

The second vital problem in transferring microscopic sound images from the new high quality original recording to the outgoing print was due to the scattering of light through the film grain structure in such a manner that the wave shape of the sound image was either distorted or the very delicate tone shadings were completely "washed out," when a conventional light source in printing was used.

Months of experimenting brought workable answers to both problems. Prints are daily coming out of the processing laboratory which represent a sound quality safely beyond previous standards for 16mm. film, and amazingly close to the best of the 35mm. theatrical release prints.

The new Telefilm printer now in use embodies mechanical and optical principles which largely take advantage of the limitations of acetate 16mm. film, and to some extent out-flank the limita-

tions, rather than make a frontal attack upon them.

An example of the out-flanking approach is in the film slippage problem. Instead of utilizing the more or less uncertain "non-slip," or the "brute-force" principles, it was decided to try "controlled" slippage in conjunction with a different exposing method. In the "controlled" principle the slippage is allowed to occur at a uniform rate, to avoid "wows" at low frequencies. It takes place at a rate equal to the difference in length between the original film and the new raw stock. This comes about by a revolutionary sprocket surface, wherein the unevenly spaced sets of perforations of the two films are allowed to freely seek their correct diametrical position on the main drive sprocket.

In addition to this new approach, the tooth and perforation contacts are isolated from the sound track edge on the opposite side of the films by a "lateral" loop. The remaining 24 cycle (frames per second) flutter is free to become absorbed by friction between the film surfaces. The case for the effectiveness of this principle may best be summed up by the following test: An original sound track with more than half of the sprocket hole's outside edges broken open—the result of more than eight hundred runs through a conventional contact printer—had to be discontinued from release. The fact that the perforation side was so stretched that the film could no longer be pressed flat upon a smooth surface, made further printing near impossible. With the new printer in operation, the urge to try it under the most severe conditions resulted in placing the film back in service for many more prints. There was a decided absence of the wow and flutter heard earlier in the film's wrinkled career. It then received a first quality rating for sound by all who listened to the prints.

The controlled slippage principle reached its peak effectiveness when it was combined with a radically new exposing light system. In the new Telefilm sound printer a high intensity light source is used, in conjunction with a specially designed light filtering unit. This new exposing beam of light is arranged to give an exposure for the short duration of 1/7000 part of a second, in relation to a tone frequency of 6000 cycles per second. This short time element, calculated against the slow rate, uniform slippage, gives an image displacement ratio of 200 to 1 in favor of the new system. This high ratio of exposure versus film movement effectively nullifies any loss of high tone response that could result from shrinkage of an original recording film.

Routine printing on Kodachrome duplicating stock has been reliable and outstanding, and research is continuing so that the advantages of this method can be fully exploited, in the direction of higher over-all fidelity for 16mm. film.

Additional printers of this design are to be made at Telefilm to facilitate the expanding demand for theatrical quality 16mm. release prints.



The DINKY BOOM

For Properly Lighting Motion Pictures,
Home Movies, Portraits and
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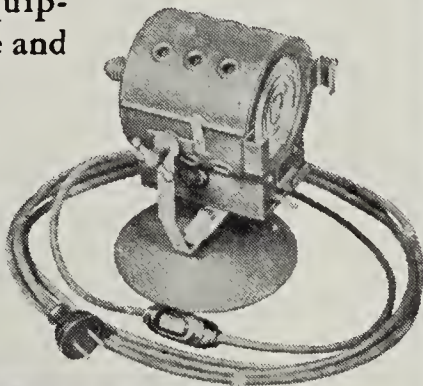
Something has been added...at the request of Hollywood Camera Men...to the Bardwell & McAlister line of Photographic Lighting Equipment...It's the Dinky Boom!

On motion picture sets, among the home-movie fans, and everywhere that fine photography is produced, the Dinky Inkie, that handy little 150 Watt Spot, has been standard equipment. Now its use has been made much more flexible by the Dinky Boom which makes an infinite number of lighting arrangements and angles easy to obtain. The Dinky Boom comes equipped with a standard Dinky Inkie Spotlite.

With the Dinky Inkie you can highlight portrait subjects by concentrating a smooth, graduated light exactly where it belongs. You can get the greatest degree of flexibility in modeling close-ups. You can eliminate shadows in dark corners and virtually "paint" with light that is under control at all times.

For fine photography there is nothing better than Bardwell & McAlister Lighting Equipment. For good work, the Dinky Inkie and the Dinky Booms are "musts".

This wonderful little spot operates with 150 watt T-8-DC globe; focuses from an 8 degree spot to a 44 degree flood. It has the same back and front handy focusing lever as the Baby Keg-Lites. With base removed, it fits any standard tripod. Total weight 2¾ pounds.



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- 4 B & M folding-leg-type stand.
- 5 Nine foot six inch extension.
- 6 Weight 17 pounds.

Write for literature describing the Bardwell & McAlister line of Photographic Lighting Equipment. There is a light for every possible need. Ask about the Senior 5000-watt Spot, the Junior 1000-2000-watt Spot, the Baby Keg-Lite 500-750-watt Spot, the Single and Double Broads, the Foco-Spot, Snoots, Barndoors and other light control accessories. Address Department



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By JAMES R. OSWALD



This comely young miss with the vibrantly waving towel typifies the spirit of youth.

AN old Chinese proverb has it that "a picture is worth ten thousand words." Such an assumption might be fairly accurate so far as still pictures are concerned, but when movies are referred to, this is a tremendous understatement. And just what kind of movies are worth more than the proverbial ten thousand words? Why, movies that *live, laugh, and love* . . . movies that capture the gaiety of youth, the frivolity of humor, the tenderness of passion! But I'm not referring to the professionally produced pictures you see every week at your neighborhood theater. I'm talking about *home* movies . . . *your* home movies!

All year 'round is picture taking time for the wide-awake movie maker, but nevertheless we, as residents of that part of the North Temperate Zone where your breath freezes in mid-air in the winter, and you fry eggs on the sidewalks in summer, have our preferred seasons for engaging in outdoor movie making activity. With spring and fall close runners-up, summer, just the same, takes the lead as the most popular time for going about our business of taking pictures and having fun. For 'tis in the summer when even the casual filmer takes his camera down from the shelf, throws his production plans into high gear, and grinds away.

The beach is always a popular center of liveliness and laziness this time of year, and hence a good source of human interest material for the alert cameraman. It's at the beach where everyone from toddling tots to tottering grandpas comes out for a plunge in cool, refreshing waters, or merely to loll in the sand and absorb a good quantity of pure and unadulterated vitamin D sunshine . . . Nature's way.

Take a look around. You don't have to be a beachcomber to realize that right here is the essence of one of the most down to earth, human interest movies ever made. Sure, maybe you are used to traveling half way 'round the world for pictures. Perhaps this is the first

gotten something, but mere conventionality isn't going to spoil *her* fun . . . not by any means!

Don't look now, but a squint in the other direction reveals an interested young glamor girl casting her eyes your way. She certainly isn't on the rocks *figuratively* speaking! And note there at the shore . . . the slick chick in slacks, just taking everything in! If you're the wide-awake cameraman you like to think yourself to be, you've been taking it all in, too, not only mentally, but *moviely*.

As an aggressive filmer, then, be prepared for a whirl of merriment and movie making at the beach. Don your bathing suit and get into the "swim"



One of these youngsters seems to have forgotten something, but mere conventionality isn't going to spoil *HER* fun—not by any means!

summer you're sticking around the old home town. But here, at the beach, is *life*, real and unposed, not artificial and "out of this world." See over there on the hill, for instance. That comely young miss with the vibrantly waving towel typifies the spirit of youth . . . full of vivaciousness . . . not a care in the world! And glance at those kids by the water. One of them seems to have for-

of things while acquiring your own cherished coat of sun tan. It's *human interest* that sells those pictures to future audiences, so with this thought in mind, watch your clues carefully before pressing the button. If things begin to lag, stir up a game of some kind, and wait for candid opportunities, which will be plentiful.

(Continued on Page 335)

DuPont Perfects Film for Television

A new motion picture film which greatly facilitates the telecasting of public events within a few hours of their occurrence and produces improved television images was introduced to a New York television audience recently in a joint Du Pont-NBC demonstration over station WNBT.

News cameramen from the National Broadcasting Company used the new "Telefilm" to make pictures of a full dress parade and presidential color ceremony in Washington that afternoon. Immediately after the Washington ceremony the exposed stock was developed, flown to New York, and used in negative form with the WNBT television film camera reversing the image electrically to its positive form. Pictures of the event were broadcast just a few hours after coverage had been completed.

Similar telecasts of newsworthy events have not always been feasible, according to television engineers, because lack of time or complications in setting up heavy television equipment did not permit direct broadcast. The new film, used in an ordinary movie camera, is designed to cope with such conditions. It makes a news-reel available for broadcast as soon as it has been developed.

The film can be broadcast either as a positive or negative. When used as a negative, it is reversed electrically and broadcast for normal reception. This eliminates one processing step and in cases of sudden news breaks where speed is essential, television stations are able to present negative film without the delay involved in making positive prints.

The method of using negative film to broadcast a positive picture was described as a relatively simple process. NBC engineers explained that at each stage of signal amplification in the television system the picture is reversed either from negative to positive or positive to negative as it passes through an amplifier tube. If a negative film is being televised, modification of one amplifier stage in the system results in a positive picture in the receiving tube. On a number of previous occasions negative motion picture film has been broadcast by station WNBT. The new film, however, brings much more satisfactory results, engineers said.

This film carries a special emulsion to pick up detail in both highlights and shadows of outdoor scenes, according to Du Pont film technicians. This emulsion was developed as a result of intensive research at the Du Pont film laboratories in Parlin, New Jersey.

The importance of additional detail to television is great. In telecasting any motion picture film there is some loss in gradation of tones on receiving screens. By providing a greater latitude in light range, the new film will permit more detail in outdoor action, which in turn will give television images with more clarity.

Microfilm Division of Pathe for Bell & Howell

Bell & Howell Company has acquired the physical assets and patents of the Microfilm Division of Pathe Industries; according to announcement of J. H. McNabb, president of B & H. He added that a complete microfilm division had been organized at the company's Lincolnwood plants, to include engineering, production, sales, and service. F. L. Rogers has been appointed to direct sales and service operations.

Royal Photographic Society Honors George Pearson

George Pearson, British film pioneer, has been awarded Honorary Fellowship in the Royal Photographic Society. As early as 1918, he joined in formation of Welsh-Pearson Film, Ltd., and is still making films as director-in-chief of the British Government's Colonial Films unit.

During more than 30 years in the film business, Pearson has directed more than 300 pictures, including in excess of 30 sound films; written 38 originals, 118 scenarios and produced 25 films.

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My Film Tour Through Central America

By E. H. SCOTT

I HAVE just returned from a four and a half months' trip around Central and South America, during which I filmed the highlights of Central and South America in color. Before I left I spent nearly two months reading every book I could find on what there was to see and do in Central and South America. In addition to this, I had the tour agency who handled my transportation and hotel reservations give me all of the information they had in their files about the various countries we were to pass through. You would think that would give you a very good picture of what there was in the Latin American countries,—but I can tell you now, that it's just about impossible to form a real picture of what you will actually see down there from reading books.

Now that I have made the trip, I know the answers to:—(1) How much film is required for the trip; (2) What are actually the most interesting countries from a movie-maker's standpoint.

Last month I gave you the answers to the first question, and this month I shall try to answer the second one.

Most Interesting Countries

All of the countries in Central America are interesting but naturally some are more interesting than others. I would place Guatemala first, Mexico second, and Costa Rica third. The only limit to the amount of film you can use in these countries is the quantity you desire to take with you,—for all of them are a filmer's paradise.

Guatemala Most Colorful

If I had to narrow down my choice of countries to one only, it would be Guatemala, for it is the most colorful country in either Central or South America. There are over 60 different villages in Guatemala where the natives all have their own distinctive, colorful costumes, which they wear not only on fiesta days but seven days a week. The markets and villages of Guatemala are full of color. As you pass along the roads, you will find natives carrying everything from babies in slings on their backs to baskets of fruit, vegetables and personal belongings.

There is hardly a flat spot in Guatemala, and the beauty of the mountains and lakes make you want to stop at every turn of the road and shoot.

The Guatemalan villages are all very primitive and picturesque, with native weavers sitting in front of a large number of the huts, and children and chickens playing around them in perfect harmony.

There are many interesting shots you will get in and around Guatemala City in the streets with the native policemen directing the traffic, primitive ox-carts side by side with automobiles, and the National Palace, just to mention a

few. There is one particularly effective shot I made in the patio of a little restaurant called The Patio. In fact, it was one of the best I made in Guatemala City.

Lake Amatitlan and Palin

Soon after leaving Guatemala City, you reach Lake Amatitlan; then a little farther on, the village of Palin. The lake itself is very picturesque, and there is a little stream just before you get into the village where you will generally find a number of native women washing their clothes right in the stream.

Find out what time the train arrives in the afternoon at Palin. There you will see about thirty or forty native women waiting with baskets of fruit on their heads. As soon as the train pulls into the station, there is a rush and the natives, with baskets of fruit at every car window,—make as colorful a shot as you will ever get.

Continuing on, you reach Antigua—full of quaint little streets and picturesque ruins. A short distance out of the town is the Retena coffee plantation, one of the show places in this district, where visitors are welcome. You will certainly want to make some shots here.

Villages Around Lake Atitlan

But it is when you go farther on and reach Lake Atitlan and Chichicastanengo you will really "go to town." I could use this whole issue and still not exhaust what I could say about them. Lake Atitlan is a scenic gem, and along its shore are about twelve native villages. Of these, there are three that are particularly interesting, San Pedro, Santiago Atitlan and Antonio Palopo. A day here is all too short, and you can use 500 feet of film and only make a good start on all you could shoot. Even before you board the launch to go to the villages on the other side of the lake, if you are enthusiastic enough to get up at 6 a.m., you can start shooting. Take your camera with a full 100 foot roll in it to the launch landing in the early morning, for here you will generally find a group of natives, men, women and children and all kinds of animals, waiting for the launch to take them back to their villages.

The launch takes you around the lake to the three villages and you can make the trip nicely in a day, but be sure to take your lunch with you for all of these villages are very primitive and there is no hotel or restaurant in any of them. San Pedro is probably the most primitive, and is built on a hillside with most of the native huts thatched. You will find plenty to shoot in this village. Then continue on around to Antonio Palopo. A larger number of tourists visit this village than San Pedro,

so the natives here are a little more sophisticated.

There is some very fine hand-woven cloth and embroidery here. You can get some good shots here by making a deal to buy some of the embroidery or cloth provided you can take some movies. Santiago Atitlan is the next village, different to the other two, but quite as primitive.

Native Market at Chichicastanengo

Then, continue on to Chichicastanengo where they have one of the most colorful market scenes, not only in Guatemala, but in all of Central or South America. I can't begin to describe the variety of the scenes here—you just must see them. All I can say is that you will have an extremely busy morning and the close-ups you can secure are simply wonderful.

At one end of the market square is the Santo Tomas Church, with a long flight of stone steps in front, up which the natives slowly walk swinging pots of incense to and fro as they ask for a blessing on their family and relatives. When they reach the top of the steps, they enter the church and start spreading handfuls of flower petals on the floor and light candles before which they devoutly pray.

Stone Idol Worship

But all of the Indians don't depend entirely on their appeal to their Christian God, because many of them, after they have prayed for a blessing at Santo Tomas, climb to the top of the hill near the village and there pray before an old, cracked stone idol, Turkah, swinging their incense pots, lighting candles, spreading flower petals and praying for the same things that they did in the church. But you will have to be very careful if you want to take a movie of this scene. I used a wide angle lens, set my camera up on a tripod, then walked away from it as if I were not going to worry too much. I had previously checked the exposure so my lens was all set and the spring on the camera wound tight. When there was an interesting group in front of the idol, I simply walked over to the camera, locked the starting button in position to set the camera running, then as nonchalantly as possible, walked away, so that the natives did not know whether I was taking a picture or not. You should see this color shot!

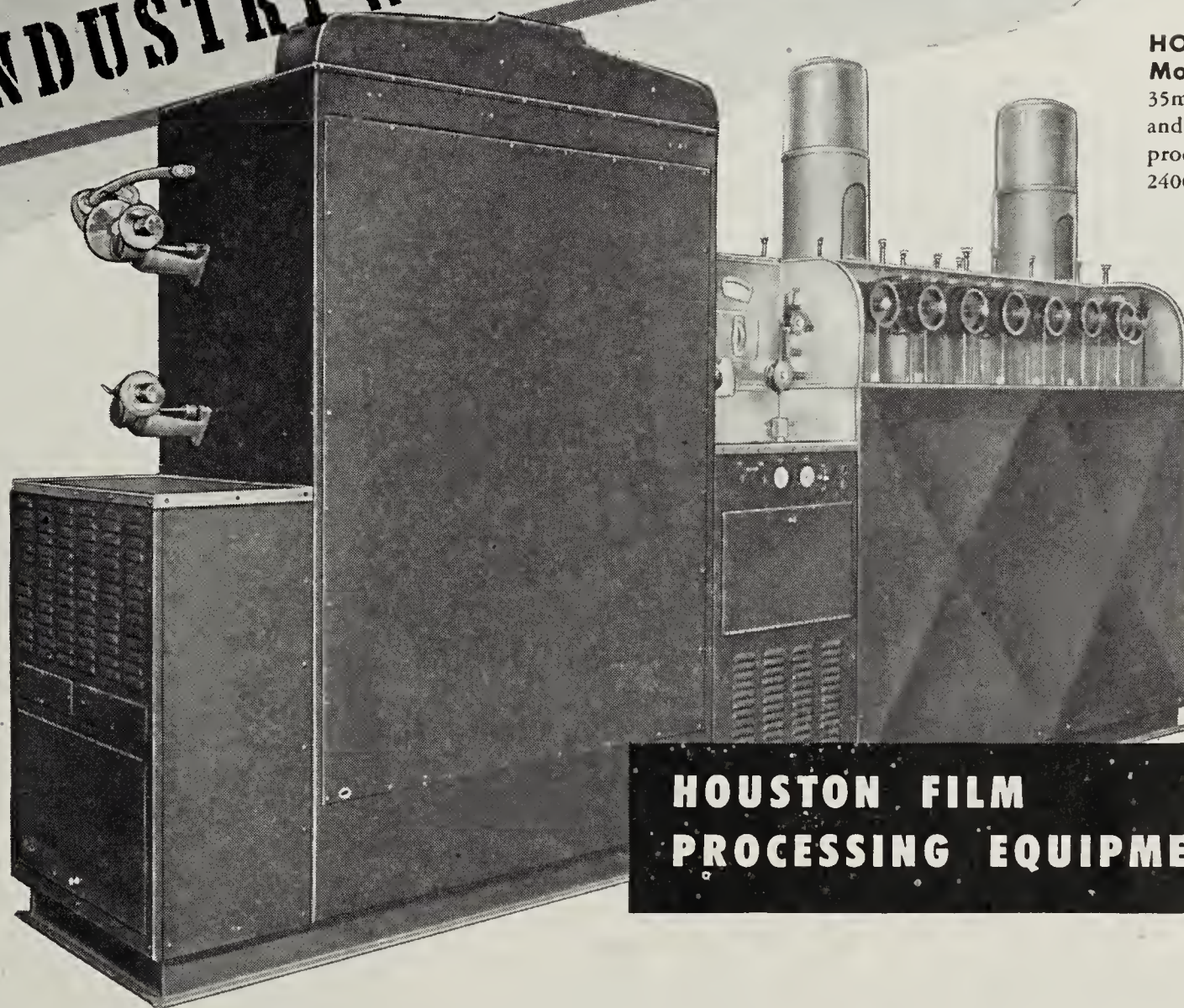
The Mayan Inn Unique

At Chichicastanengo, you will stay at the Mayan Inn, which is also something to see. It is very old Spanish and rambling, with the native attendants rigged out in Indian costumes and a native Indian marimba orchestra playing every night. At this hotel, you will have your own No. 1 boy. He will not only appear

(Continued on Page 330)

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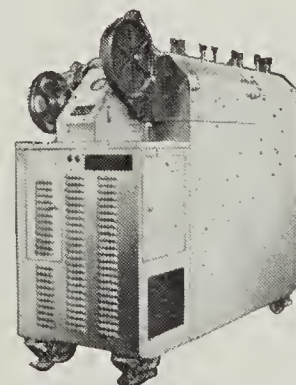
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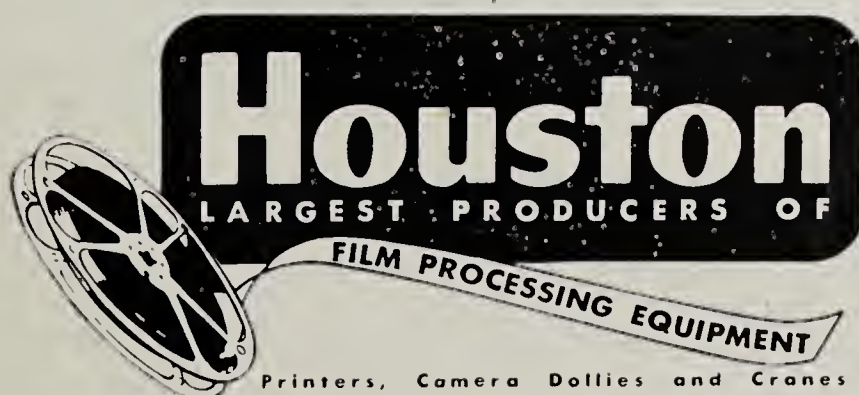
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AMONG THE MOVIE CLUBS

Seattle Amateur Movie Club

Members of Seattle Movie Club discussed the feasibility of staging two meetings a month starting in the fall at regular meeting held August 13th in Parish Hall of the Church of the Epiphany. Other items of business included possibility of a club sponsored movie show; periodic joint meetings with the Tacoma Movie Club; and plans for attracting new members from the large crop of movie enthusiasts that has sprung up during the past several years. Film program included: "Three Episodes," an ACL film produced by W. W. Ward of Portland, Ore.; an 8 mm. kodachrome made by former member Alice Post in Equador and the Amazon Valley of South America.

San Francisco Westwood

Annual picnic of Westwood Movie Club of San Francisco was held on August 11th, with members and friends journeying to Dr. Gobar's home at Emerald Lake for a most eventful day. The Gobars' served beans, coffee and salad, with members bringing along sandwiches and picnic baskets.

Film program for the July 26th meeting of Westwood comprised: "On the Italian Front," by Bob Mooney; "Monterey to Carmel," by W. H. Hogan; "A Goose Hunt," by George Ziebell; and "The Boss Comes to Dinner," by Ryne Zimmerman, ACL. Second monthly "school" session was held on August 21st, with Eric Unmack providing inside information on how to make titles.

Los Angeles Eight

Meeting of Los Angeles 8MM. Club held at Arden Farms Clubhouse on August 13th featured Past Presidents' Night, at which former leaders of the organization were introduced. Highlight was reproduction of recording made at formation of the club in 1935. First president and founder, Claude W. A. Cadarette, currently in the east, sent along a special recorded message which was also reproduced for the members at the session. Film program included exhibition of several prize-winning pictures.

Cinema Club of San Francisco

An all-member film program featured the August 20th meeting of the Cinema Club of San Francisco, held at the Women's City Club. Films shown included "Yellowstone—Cheyenne," and "Laings-Emigrant Gap," by Ben Nichols; "Native Sons Parade, Oakland 1941," and "Livermore Rodeo-San Francisco Zoo-Sierra Railway Trip" by L. Duggan; "Tiger Lily," by L. Franovich; and "1940 World's Fair" by R. Hanlon.

Los Angeles Cinema

August 5th meeting of Los Angeles Cinema Club was held in Lecture Room of the Los Angeles Museum, with an extended program of interesting pictures attracting a large turnout of members and guests. Films exhibited included: "This Land of Ours—California," photographed by member Edwin Olsen for Carl Dudley's Screen Book of Knowledge Productions; "Hospital Train," produced by Dudley; "Yosemite—Tahoe," by Don Bleitz; "Fresh As the Day It Was Picked," presented by Preco; and "Life Line of the Nation," by Edward Hutton. Dr. George N. Bartlett presented a selection of kodachrome slides under title of "Moonlight and Sunset Effects."

Contest chairman James H. Mitchell announced that November 15th has been set as closing date for the annual members' film contest.

Amateur Club of St. Louis

Second annual lawn meeting of the Amateur Motion Picture Club of St. Louis was held at the home of Joseph G. Epstein on August 14th. Film program under the skies included: "The Thirty-Niner," by Al Morton of Salt Lake City; "A Day in Catalina," by Lon Wadman; "A Day in the Ozarks," by C. E. Talbot; and "Twas the Night Before Christmas," by Martin B. Manovill.

Club's annual picnic was held at Forest Park on July 28th, attracting 62 members and guests. Movies shot at the picnic by members will be exhibited at the September meeting.

Utah Cine Arts Club

Marked success of the July picnic meeting of Utah Cine Arts Club, held in Mill Creek Canyon, called for repetition on meeting held August 21st. Members and their guests brought along refreshments and food for the picnic, and the large turnout attested to the popularity of the outdoor meeting idea for the two mid-summer months. Film program, presented in the amphitheatre adjoining the picnic grounds, comprised: "Featuring Flowers," by William D. Loveless; and "Realms of the Wild," from the U. S. Forest Service. President T. R. Pope presided, with Theo Merrill and LeRoy Hansen functioning as program chairmen.

New York Eight

Terry Manos presented his "V-E Day" film, accompanied by a fine musical score, at the August 19th meeting of New York City Eight MM. Club, held at the hotel Pennsylvania.

How Long Should a Movie Be?

By JOHN HOLLYWOOD

(The following humorous—but very pertinent — comment on the proper length of amateur film subjects, will be particularly interesting to movie makers. It is reprinted from the breezy monthly bulletin of Metropolitan Motion Picture Club, New York City, of which Mr. Hollywood is a prominent member.)

The question always makes me think of Abe Lincoln's comment on the subject of the length of a man's legs. You remember Abe said he didn't care how long a man's legs were so long as they reached the ground. Likewise, I suppose a movie is long enough when it begins at the beginning and ends at the end. But what of the stuff between the beginning and the end? That's the rub. Most fine movies are worked on, slaved on, run and re-run, cut and re-cut, until all the dross is out of them and nothing but the pure essence remains.

What was it another wise and witty man had to say about writing a long letter? "Excuse me," he wrote, "for the long letter. I didn't have time to make it shorter." Verily it takes plenty of time to write a good short letter or to make a good short movie.

When the poet said, "A thing of beauty is a joy forever," he surely wasn't thinking of long footages of beautiful Kodachrome shown without recess and without much rhyme or reason except sheer beauty. Beauty, as the poet knows, has a saturation point. In that respect it is not much different than ice cream.

When I was a little boy I had a great passion for ice cream. I also had a very wise grandfather. Every afternoon when he took me walking I badgered him for ice cream. I never seemed to get enough. But one day he took the waitress quietly aside and when she served me she placed a large service plate before me piled high with chocolate and vanilla ice cream. This naturally was heaven to a little boy's eager eyes and I went to it with zest. But there was a gradual slowing down and finally a weak, little voice piped up? "Grandfather, I can't eat any more." Now I always dread that some time in a weak moment I may make and show an overlong film at the Club and the members will rise up in a body on their heels and yell: "Grandfather, I can't eat any more."

How long should a movie be? Well, it should begin at the beginning and end at the end.

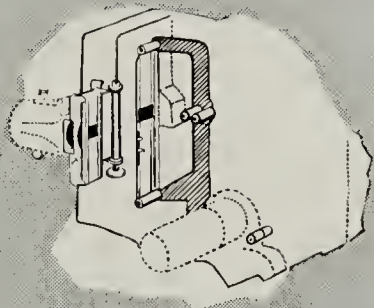
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Central American Tour

(Continued from Page 326)

about 10 seconds after you have pressed a button in your room to get you whatever you want—from huge logs for the open fire, or extra blankets, because it gets very cold up here—but when you get to the dining room, you will find your No. 1 boy waiting for you. It is quite unique.

If there is only one country in Central America you can visit, make it Guatemala, for it is the most interesting and colorful of them all.

Filming in Mexico

Next to Guatemala, Mexico is without question the most interesting country for filming in Central America. I started at Guadalajara, and after seeing Mexico, I would still start my trip there again, driving through by car to Mexico City.

There are a number of very interesting street scenes in Guadalajara in addition to the many glass and pottery works. The most noted of the pottery works is the El Arte Tonalteca Studio, where you can see everything from vases being molded on a potter's wheel as it was done an hundred years ago, to the finished colorful product. Outside Guadalajara along the road you will see dozens of little home industry brick works with the whole family—father, mother and the children—digging the clay in the field, then mixing and molding it with simple wooden forms into bricks.

Most Dramatic Sight in Mexico

Leaving Guadalajara, you pass through dozens of villages on your way to Urapan, the stop over on your visit to the Paracutin volcano. You may remember the story about three years ago of the farmer plowing in his field when he noticed smoke coming from a corner of it. Today, where that wisp of smoke started, is a mountain of lava over 1000 feet high, and all you can see of the little village that was once near it, is the tops of the spires of the church, for the slowly moving lava has now completely covered the village.

When you do this trip, don't forget to take shots of the road as you go into the volcano, both medium and close-ups. I can't imagine any rougher, bumpier road in any part of the world. It is possible that you will remain in your seat about ten minutes out of the three-quarters of an hour trip, but I doubt if it will be more than that. Don't fail to take some close-ups of the car negotiating some of these bumps and you will have a picture!

When you reach the end of this road, you will find the Mexican horse camp, for horses are the transportation that will take you up to the foot of the volcano itself.

As it becomes darker, the red glow of the lava becomes brighter. You go right to the very edge of the red-hot lava field. If you use an F 1.4 or F 1.9 lens at eight frames per second about 6 feet from the burning lava, you will get some wonderful film and a picture you will be proud of. Don't spare the

film here. Shoot 15 or 20 feet, and you will have something.

The village of Urapan is quite interesting. Just around the corner from the Mirado Hotel is the lacquer shop of Elvia Cerda, the most expert lacquer worker in all Mexico. He has some simply beautiful things, trays, masks and little boxes of various sizes, and you can film everything from the girls applying the color to the lacquer work to the finished product.

Butterfly Fishing Nets

Continuing on to Lake Patzcuro, you go across by launch to the little fishing village of Janitzio. This is where they have the butterfly fishing nets that the guide-books talk about. Unfortunately, this method of fishing went out of date a great many years ago, but it is still good for the tourist. You will have little difficulty arranging with the launch man who takes you across, to have one or two fishermen get out their dug-out canoes and butterfly fishing nets and go through the motions of fishing with them.

Leaving Patzcuro, you pass through dozens of interesting scenes, oxen ploughing the fields, native women along the banks doing their family washing, wonderful valley and mountain scenes, where you will shoot hundreds of feet of film before you realize just how much you are actually using. You will find that the Aqueduct with the little plaza in front of it at Morelia makes a nice piece of film.

Beautiful Panorama at Mil Cumbres

After 50 miles of the most winding mountain road imaginable, you reach Mil Cumbres, 12,000 feet above sea level, to see a panorama of mountain scenery that is in my opinion, one of the most beautiful in the world. I have done a lot of traveling in my time and I don't ever remember seeing anything finer than the vista of the mountain ranges at Mil Cumbres.

From this point, you will start to descend and soon reach the Spa of San Jose de Purua, where they have one of the finest resort hotels in the world. The buildings are long and rambling with a lot of red and brown, and they make wonderful color pictures.

High Points Around Mexico City

Continuing on, you reach Mexico City, where you have unlimited subjects, among them: the famous floating gardens of Xochimilco, the Pyramid of the Sun, the Temple of Quetzalcate, Taxco, Fortin, Cholula, The Shrine at Guadalupe and dozens of others.

Probably the most colorful thing around Mexico City is Xochimilco. This is full of color with the gondolas decorated with real flowers. There are Mexican flower women in their small miniature dug-out canoes, gondolas with a cook house rigged up in them, strolling musicians, who do their "strolling" in a gondola, and who for a few pesos, will pull alongside your gondola and entertain you with some of the songs in old Mexico—are just some of the sights you will film along the canals of Xochimilco.

The Pyramids of the Sun and the Temple of Quetzalcate with its wonderful

stone carvings are just outside Mexico City and were made for filming.

Taxco Movie Maker's Paradise

One of the first day or two-day trips out of Mexico City should be to Taxco. All along the road, you will pass primitive, native villages on the hillsides and farmers ploughing their fields with oxen and crude wooden plows. Taxco is built on top of a mountain. At the hotel your bedroom is likely to be on one level, and you climb to another level to reach the dining room. There simply isn't anything like Taxco, for the natives here have literally built their homes and shops on the side of a steep mountain. Inside of every second doorway you pass you will see a native silversmith, for here they have one of the largest silver mines in Mexico. From the number of silversmiths at work, I think they must produce about half of the native silver articles sold in Mexico.

Then there is Cholula and Puebla. On the way to them you pass through the village of San Martin. As you enter the village, you will see a display of about a quarter of a mile long of Indian rugs, and as the designs are so colorful, you are going to shoot a lot of them and probably purchase one or two for yourself.

A little farther on, you reach Cholula, where, believe it or not, there are now 160 churches, and at one time there were over 400. When Cortez invaded and conquered Mexico, he tore them down, but later 160 were rebuilt. I don't need to tell you what kind of a place this is for all kinds of medium shots, semi-close-ups and close-ups. A few miles further on is Puebla, famous for tiles of all colors and sizes, which are incorporated into the homes and shops of the city.

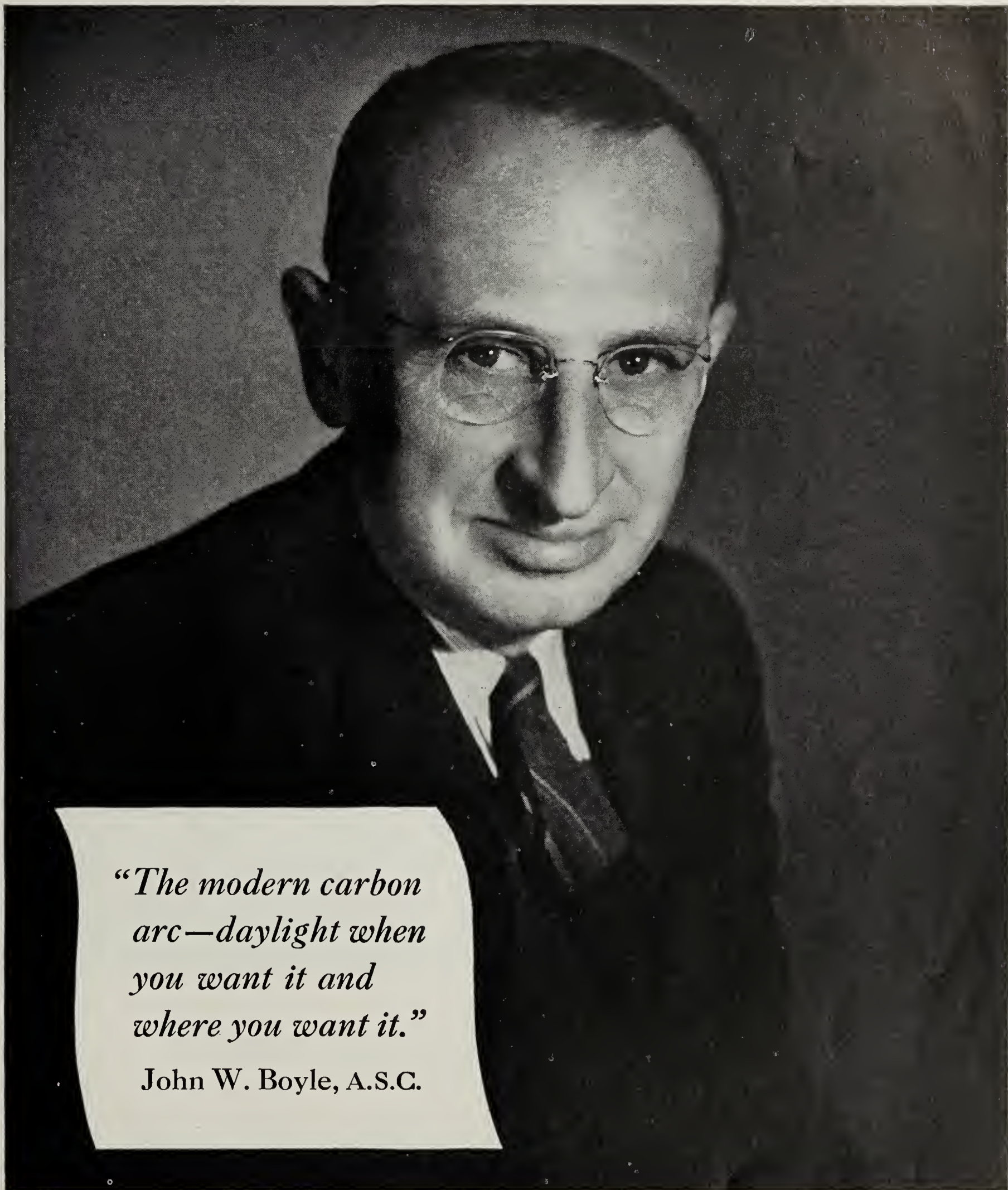
There are a large number of interesting churches in Mexico, but the most interesting is the Basilica of Guadalupe. This is very colorful with stalls on all sides and in front selling religious objects, and crowds of pilgrims coming and going into the church, etc. You will find a two and a four inch lens very useful here, for you can set up your tripod and get all kinds of close-ups that make perfect unposed pictures.

Filming in El Salvador

Leaving Mexico, you pass through Guatemala and continue on to El Salvador. This is a small country and I believe you will find two or three days sufficient to film all that there is of interest. The sugar mills and sugar cane fields here make very good subjects for filming. Then there is Izalco volcano which is very active and erupts regularly every 25 minutes. The best place to get shots of this is on the road out to Lake Coatepeque, for on it you come fairly close to the volcano. You will also get some wonderful scenic shots, and shots of workers in the sugar fields on this road. Lake Coatepeque is very picturesque.

Take a trip to the top of the extinct San Salvador volcano. When you get there, the view is wonderful and gives you a very good idea of El Salvador. But outside of a few villages around the

(Continued on Page 341)



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16mm Lighting

(Continued from Page 318)

such as Kodachrome is used, than it is with the three-strip method.

In the 35mm. three-strip system a great deal of rebalancing may be done in the printing process because the laboratory is working with three separate films representing the color components. In the multiple layer method very little rebalancing can be done and the cinematographer is obliged to have the color balance on the film when it is turned over to the laboratory.

The use of white light balance and carbon arc lamps for 16mm. color may add about twenty-five per cent to the lighting bill and a thousand percent to the quality of the finished picture.

One of the fallacies of color cinematography, long ago ruled out in 35mm. color, but still used to some extent in 16mm. color, is the flat lighting technique. Proponents of this system believe that, due to the rather narrow latitude of color film, better quality will be obtained if the set is illuminated with a uniform amount of light. The color itself, they say, will provide contrasts needed for proper modelling.

It has been stated that Kodachrome which is to be duplicated on Kodachrome stock should be flat lighted in order to compensate somewhat for the gain in contrast by duping. While it is true that the light levels should be controlled to closer limits and the level of the key-light should be accurately balanced for the middle of the exposure range this does not indicate the need of flat light. On the contrary it does indicate the need of very close and accurate control of light.

In theory flat lighting may seem all right but the customers won't buy it. One reason is because *for professional color cinematography flat light is entirely too contrasty.*

In amateur cinematography it is possible to flat light a set and choose colored objects to fit the lighting. Imagine telling an industrial concern it will be necessary to change the color balance of labels and other advertising to meet the requirements of flat light!

An often used analogy of this point is the use of flat light to photograph a dark green avocado, a bright red apple and a yellow lemon. If the intensity of the light were adjusted to correct exposure for the apple, the avocado would be underexposed and the lemon would be overexposed.

Instead of telling the producer he will be obliged to darken the lemon and lighten the avocado the professional cinematographer works to balance the illumination falling upon each object so the range will be within the latitude of the film. It is the knowledge and ability to arrange the lighting for a given effect that makes the cinematographer worth his hire.

These effects are only possible with



Director of Photography Virgil Miller, A. S. C., (center), supervises lighting setup for scene with Margaret Lindsay in the Cinecolor production of "The Vigilantes Return" at Universal-International.

lighting equipment having the greatest scope. In other words the cinematographer must be able to use all types of lighting equipment. To do this on color the various sources must be balanced in quality to the white light of sunlight.

In studying the artistic and dramatic effects he wishes to create the professional cinematographer thinks of lighting units in terms of brilliance, volume, penetrating power and controllability.

He must be able to flood an area with soft, diffused illumination, or to send a streak of brilliant sunlight cutting through the general level of light. By a simple suggestion he must be able to drive light into the deepest shadow area of a huge set, or to gently raise the illumination on the features of a character so as to modify slight contrasts he wishes in the skin texture.

In a two dimensional picture shape ceases to be a factor. The cinematographer must create the illusion of depth by dropping a curtain of light between the characters and the back walls. In the finer points of his art he even models the folds and gradation of a monochromatic gown by the judicious use of cross lighting. By moving the lights like master chessmen, using one against the other, he creates the illusion of roundness.

The cinematographer knows the image he will see on the screen when he views the rushes will not be painted there. It will be an image of the projection light source which he has been able to modify into a picture, good or bad, depending upon his ability to create variable film density and color by his choice and placement of set lighting equipment.

Sixteen mm. professional cinematography is still suffering from an "amateur hangover." Having been produced for the amateur field much of the thought surrounding it is based on the idea that it will be used with minimum equipment and budget expense regardless of whether the full objective is achieved or not.

This is no criticism of the results obtained by the amateur cinematographer. He often produces outstanding material with very little to work with. It must be admitted, however, that he either wisely remains in the very narrow field of operation, sacrificing the objective to the process and available equipment, or he comes out of it with an inferior picture.

The professional 16mm. cinematographer, on the other hand, is working on a picture where the total budget may run into well over six figures. His success or failure depends upon the lighting equipment he has and if the picture budget does not allow for adequate lighting he will be in exactly the same position as the amateur.

The producer may lavish production money on a large set with infinite detail in the furnishings, even to real paintings and antique oriental rugs, yet if the lighting is inadequate the whole thing will appear on the screen as flat as though it were a painted backing.

We can profit by the lessons learned in the shooting of 35mm. color and allow for an adequate lighting budget, or we can arrive at that conclusion by costly experience. If we operate with an inadequate lighting budget the picture will be inadequate. In cinematography light is not only the means to an end, it is the end itself.



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Aces of the Camera

(Continued from Page 311)

the most famous of their kind: the famous, "Perils of Pauline" and "The Iron Claw." The only pictures of that day, incidentally, which publicised the name of the writer with the product. The writer being the late George B. Seitz.

It would be the most obvious bit of continuity to relate that Lester, afire with the smell of greasepaint, threw in his lot with the new industry then and there. But it didn't work out that way. He wanted excitement. And although he was fascinated and intrigued by the business of movie-making he couldn't see that it offered any promise of excitement. For the customers, yes. But for the movie-makers, no. So he became a racing driver.

Racing the automobiles and the motorcycles on the tracks and the roads of that day provided him with all the excitement he was looking for, and some he hardly expected.

One day, while riding a motorcycle in a race on a dirt track, he was fighting for the lead and pulled his mount around the turn into the last lap. The front wheel shuddered as it struck the deep ruts, and came away from the frame. When they picked him up from the other side of the hole in the fence he was al-

ready beginning to think of easier ways to make a living.

He went to work for Rolls Royce, and while in Florida for that company ran into a film unit on location from Hollywood. They were a wonderful crowd, and though they borrowed his Rolls and used his services in a number of ways—none of which paid anything—the experience revived Lester's interest in picture making so he followed the troupe back to California.

In Hollywood, Lester's athletic prowess and a natural bent for dering-do led him into the ranks of the stuntmen. He found he had to change his opinion regarding the opportunities for excitement in picture making, but as he became aware of what was going on he decided that the cameramen held the key positions in production, and so he decided to become a cameraman.

But it wasn't as easy as that. Before anyone would let him get near a camera he had served an apprenticeship as propman and grip. Then Jimmy Diamond gave him his chance as an assistant at Universal.

That was the beginning. To achieve a perfectly rounded background he subsequently worked under the best cameramen of the day, until he got his first chance as a Director of Cinematography at M.G.M. on "The Prizefighter and the

Lady", starring Max Baer, and directed by the late W. S. Van Dyke.

That was sixteen years ago. Since then he has photographed scores of pictures for Metro. Among them, and you can put this in the small world department, twenty with his old friend from the Wharton Brothers Studio in Ithaca, George B. Seitz.

Some of the most magnificent work of its kind ever turned in by a cameraman was done by Lester White during his assignments on "Mutiny on the Bounty", and "Captains Courageous". These famous epics of the sea have since become classics of the screen. The stark realism of the sea sequences, achieved through superb photography and with a minimum of trick shots, brought a new stature to motion pictures; and cameramen were the first to recognize the contribution of their fellow craftsman.

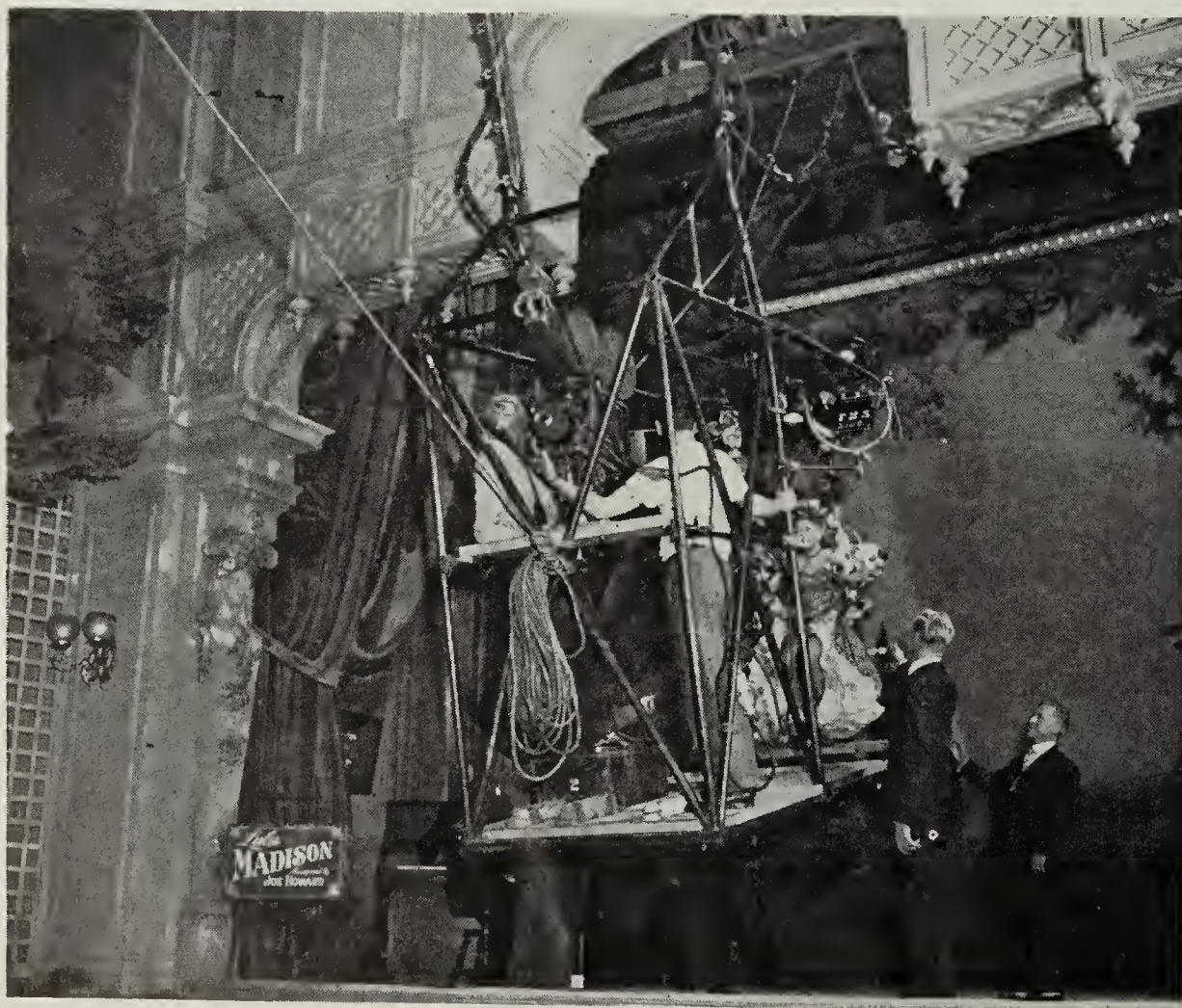
To shoot the outdoor scenes for those two pictures Les spent the better part of three years at sea with the "M.G.M. Fleet". A great deal of that time was spent in experimentation and improvisation as the crew struggled to get shots that had never even been attempted on such a scale before, and which were to thrill audiences the world over.

When it is realized what large sums of money went into that experimentation and subsequent achievement, it certainly reflects credit on our bigger producing companies who will go to such lengths in their efforts to give their productions a plus value.

Lester's success in the sea epics was so marked that he was in danger of being typed as a sea-going cinematographer. Fox borrowed him to shoot, "Down to the Sea in Ships", which starred the late Laird Cregar, and which, to the great misfortune of all movie-goers, was shelved, unfinished, upon the untimely death of that great actor.

For scenes in "Down to the Sea in Ships" Les spent six weeks in the Gulf of California, chasing whales in old fashioned whaling ships. With James Havens, that great marine director, demanding and getting the impossible, Les mounted cameras in whaleboats to get close-ups of unsuspecting whales who felt the business end of a well aimed harpoon.

With the memories of such adventures Les waxes indignant when he hears people talking about the soft, effete life trick photography and the process shot has ushered in for cameramen. While quick to admit the advantages to production that can be gained by the modern-understanding of special effects, he feels that the various "tricks" have been publicised to the point that the public deludes itself into believing that everything is trick work done from the comfort of an armchair. And, with wisdom, he points out that this practise is robbing the public of the excitement and glamor they felt about the early movies. "There's hardly a day goes by," he exclaims, "but that some cameramen is



SWINGING CAMERA PLATFORM. Directory of Photography Ernest Palmer, A. S. C., was actually "the man on the flying trapeze" for shooting this setup for the 20th Century-Fox production of "I Wonder Who's Kissing Her Now." In order to closely follow Martha Stewart on her swings out over the theatre audience, special caged platform was suspended by cables from girders for swing through an 80 foot arc. In addition to Palmer, the camera and crew, the platform carried two senior mazdas and a kag to lite the player for main light source on the swings.

sticking his neck out to get a particularly difficult shot." And perhaps he is remembering the time in the Gulf of California when the tail of a particularly irate whale made matchwood out of one of the camera boats. Or, again, when a fellow whale, probably also irate, nearly capsized Les' camera boat when it was injudiciously grounded on the whale's back by the over-zealous oarsmen.

In electing to continue his career on a free-lance basis, Les is motivated by the promptings that goad all creative people. While he is fully cognizant of the greater opportunities that he has had as a practicing cameraman because of the scope and variety of Metro-Goldwyn-Mayers' production facilities, and is very grateful to have been able to test his talents on such diversified hits as, "Yellowjack", The Hardy Family Series, "Babes on Broadway", as well as the chance to do an "Invisible Man" picture and "White Savage", in Technicolor, for Universal, he feels that the necessarily supervised trend of though in a big company does stifle the creative impulse.

"No one," he avers, "can know as much about photography as the cameraman." And, in joining the ever growing ranks of free-lance artists from all branches of the Industry, he hopes to find vehicles that will give full rein to his skill and imagination.

War-Time Fungus Protection Offered for All Filmosounds

Special process developed by Bell & Howell Company during the war to render military and naval sound projectors resistant to fungus and moistures is now available to owners of Filmosound projectors. When thousands of Filmosounds were being shipped out to the armed forces for intensive use all over the world, specifications were set—and met, by B & H engineers—for rendering the equipment proof against adverse climatic conditions. These same Army-Navy specifications govern the treatment now offered, which includes the coating of projector and amplifier component and wiring with a special fungus-inhibiting material.

"The "tropicalization" process, as it is termed, is recommended for treating equipment destined for the export market or for use in the United States where ever the climate is excessively humid. It is applicable both to new Filmosounds and to those already in use, and can be arranged through the factory or through any Bell & Howell branch office.

New Camera Kit Case

G. Gennert announces introduction of a camera kit case, which is claimed to combine unusual elements of utility. Case has ample room for camera, filters, lens shade, light meter and other accessories; and is equipped with a long strap for carrying convenience.

Beauty, Brevity, Beach

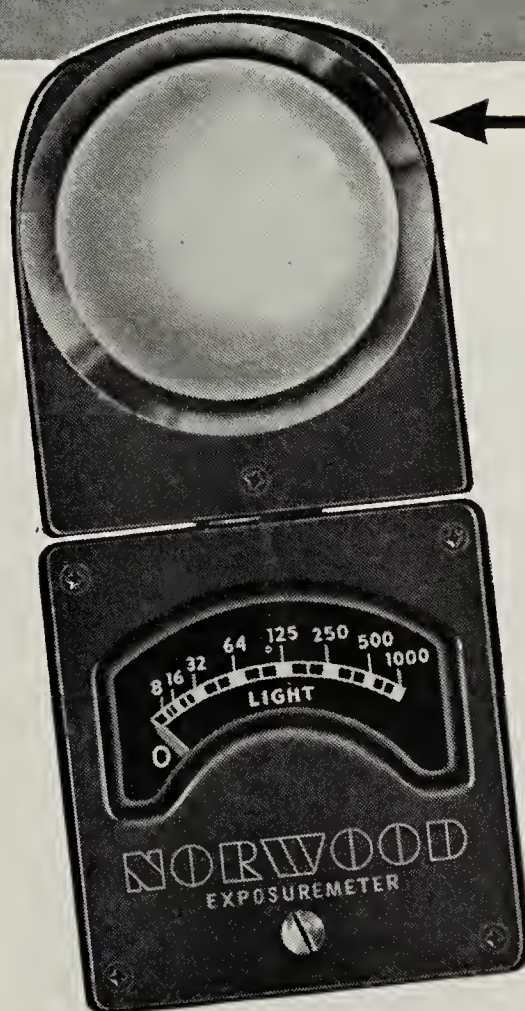
(Continued from Page 324)

From the more technical standpoint, don't forget to mix lots of closeups with your long shots, and keep the camera steady at all times. Remember, too, the added intensity of light at the beach with the sand and water acting as reflectors to the already bright rays of the sun. Stop the lens way down to compensate, or use a filter for more contrast or dramatic sky effects, if you're *not* using color film. Should you have access to a lens shade, by all means use it to keep stray light away. And be extremely cautious about preventing sand and

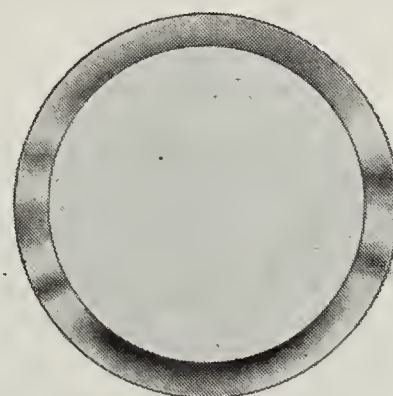
water from entering the lens, but if some should unavoidably appear, wipe it off with a piece of soft, lintless cloth, or lens tissue . . . never a handkerchief.

In conclusion, if you watch your chances, think fast, and act the same way, remembering to keep that *human interest* approach uppermost in mind, you'll probably come up with one of the grandest movies you ever filmed. Comes the long, dreary winter evenings, then, you can slink back in the comfort of your favorite easy chair, and relive over and over again on your home movie screen, those precious moments of the past, which otherwise are just part of a fleeting holiday.

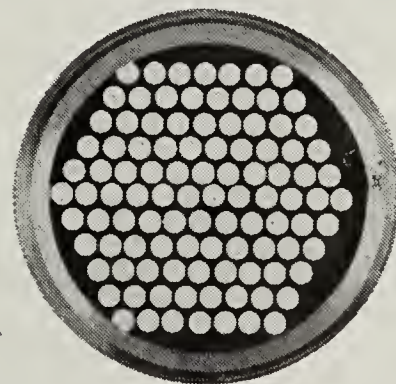
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Cinema Workshop

(Continued from Page 320)

consider the matter of locale. For example, if Sequence A and Sequence D are to be shot in locations that are close together, it would be wise to schedule them for shooting consecutively in order to save time in transportation.

Once the *shooting schedule* has been set up and approved, it should be rigidly adhered to throughout the shooting of the picture. A well-defined *schedule* will result in a smoothly functioning production.

The Budget

No matter how much highbrow filmmakers may rave on about "Art for Art's Sake" and the observation that "money does not make the picture," the fact remains that in the making of any film there will be certain necessary expenses. In the case of the home movie, financial outlay may simply involve the cost of the film with processing included. On the other hand, a commercial or documentary film may involve sets, cast, technicians, processing and film running into thousands of dollars worth of expense.

The objective of the intelligent filmmaker is to get the most apparent *production value* into his picture with the smallest possible cash outlay. This can be accomplished if a practical budget is drawn up beforehand, and if over-elaborate tricks are avoided.

An essential step in budget-planning is to get actual cash estimates on every expenditure that must be made. These can be had by speaking in advance to the technicians and craftsmen involved, finding out from them just what each item will cost, and asking them for suggestions to help keep the film within its budget. Try to get these estimates down to the penny, and then allow an additional 10 to 15 per cent for unforeseen expenditures.

Avoid effects or devices that will involve a great deal of expense. Usually, if some thought is applied to the problem, ways can be found to achieve a similar effect without stretching the budget.

Backgrounds are very important, not only as a story-telling element, but as a way to add pictorial quality to your film. They should never be merely thrown in because they are pretty; always the background should be motivated by the dramatic requirements of the scene. Nor is it necessary for effective backgrounds to involve a great deal of expense. Remember that interior backgrounds cost money because they require artificial lighting. Therefore, try to slant your action so that as much of it as possible can logically be filmed outdoors.

Almost any location boasts outdoor locales that would fit perfectly into the filming of the picture you had planned.

It may be necessary to hunt up these settings by means of scouting trips made in advance. If you do not find the exact backgrounds required, perhaps slight changes in the script will allow a satisfactory compromise.

If the settings you choose are private property, it is always a good idea to get the owner's permission in advance before shooting pictures there. Most laymen are sufficiently fascinated by the idea of motion picture production that they readily give their consent just for the novelty of watching a crew of movie-makers at work.

Props and costumes can often be borrowed, thus saving money on rentals—although it may take some inquiries in order to find suitable materials and people who are willing to lend them. Rentals of equipment can be held to a minimum by intelligent grouping of scenes. For example, if your script calls for interior scenes scattered throughout the script but totalling two weeks of actual shooting time, it is wise to schedule all these interiors for filming consecutively so that lighting equipment need only be rented for that two-week period.

Film costs, of course, vary with the type of motion picture that is being made. If you are shooting a home movie, it is convenient to shoot reversible film which is sold with the processing charge included. If, on the other hand, you are shooting a production or commercial type film (especially one



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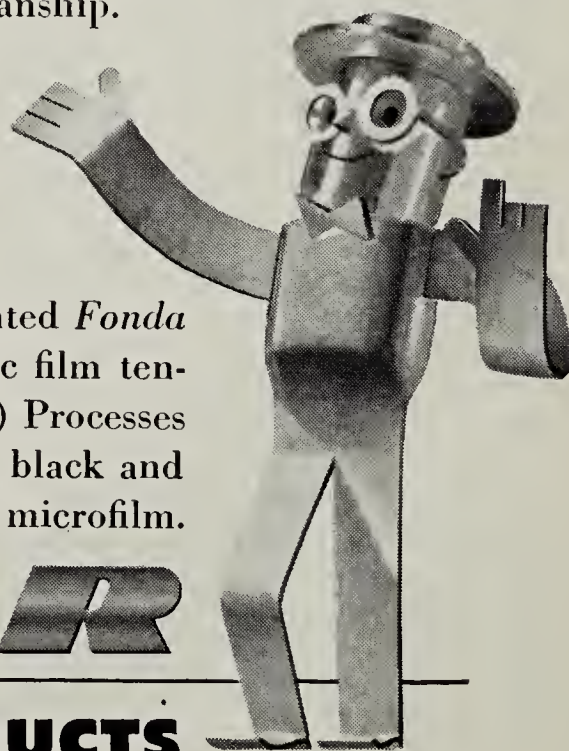
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that is later to be sound scored), you will want to use negative film from which multiple duplicate prints can be made. The processing of negative stock is usually *not* included in the purchase price, so you must count on an extra laboratory fee.

If your picture is of a commercial or semi-professional nature, you may be entitled to a professional discount on film amounting to as high as 25 per cent. This is especially true when you purchase film in large quantities. Your local wholesale film dealer will be able to tell you whether or not you are entitled to the discount.

Remember that it is not money in itself that makes the picture, but rather how intelligently the budget is applied to finance the effects called for in the script.

The Final Conference

Just before shooting is scheduled to begin, it is advisable for the producer to call his cast and crew together for a last minute conference. It is at this time that all the loose ends of production can be drawn tightly together and any final problems settled.

The producer will do well to briefly go over each sequence again, sketching its details and pointing out how the various effects are to be achieved. The production should be discussed as a unit, not as a mass of disconnected scenes. The producer should indicate how each scene and sequence is calculated to blend into the others—so that his crew will constantly think of the film in terms of its overall pattern.

It is at this time, also, that the producer should review every unusual effect that is to be required. If there is any question as to procedure, he will clarify the issue. If there are several opinions concerning the execution of an effect, it is best to discuss the problem from every viewpoint and adopt the best suggestion.

Most important of all, there should be no doubt in the minds of any of the technicians as to just what is required. Each member of the crew should know exactly what his job will call for during each phase of shooting. It is well, also, to make a last minute check to see that all sets, props, cast members, etc., will be available when scheduled.

Ready to Shoot

If pre-production planning has been carried out carefully and with attention to detail, the actual shooting of the picture should be relatively easy and uncomplicated. Studying his *script* and *dope sheets* before each day's shooting,

the director will know in advance just what is to be done the next day. If his crew is similarly well-oriented, there will be no indecision on the set, nor costly hold-ups in shooting, nor ill-advised compromises arrived at on the spur of the moment because some detail of planning was overlooked.

The director has presumably rehearsed the action of each scene with his actors before arriving on the set, but there will, of course, have to be rehearsals just before shooting so that the lighting, camerawork, sound, and other technical details can be co-ordinated with the action.

If the film is later to be sound-narrated, it is wise to read the words of the narration aloud during rehearsals of each scene so that the action can be keyed to the narration.

The director's assistant should make sure that all elements of the scene, human or otherwise, are available on the set before shooting is scheduled to begin. Last minute dashes to secure personnel or properties never help to make for a smooth-running shooting routine.

Pre-production planning is of paramount importance to the success or failure of a motion picture. On it will depend whether the resulting film is a cinematic hodge-podge or a fine piece of entertainment. The advanced amateur and semi-professional film-maker can

profit by adapting for his own use the pre-shooting routines followed in the professional film studios. Such care in planning cannot help but show up favorably on the screen.

NEXT ISSUE: *Part IV—Direction.*

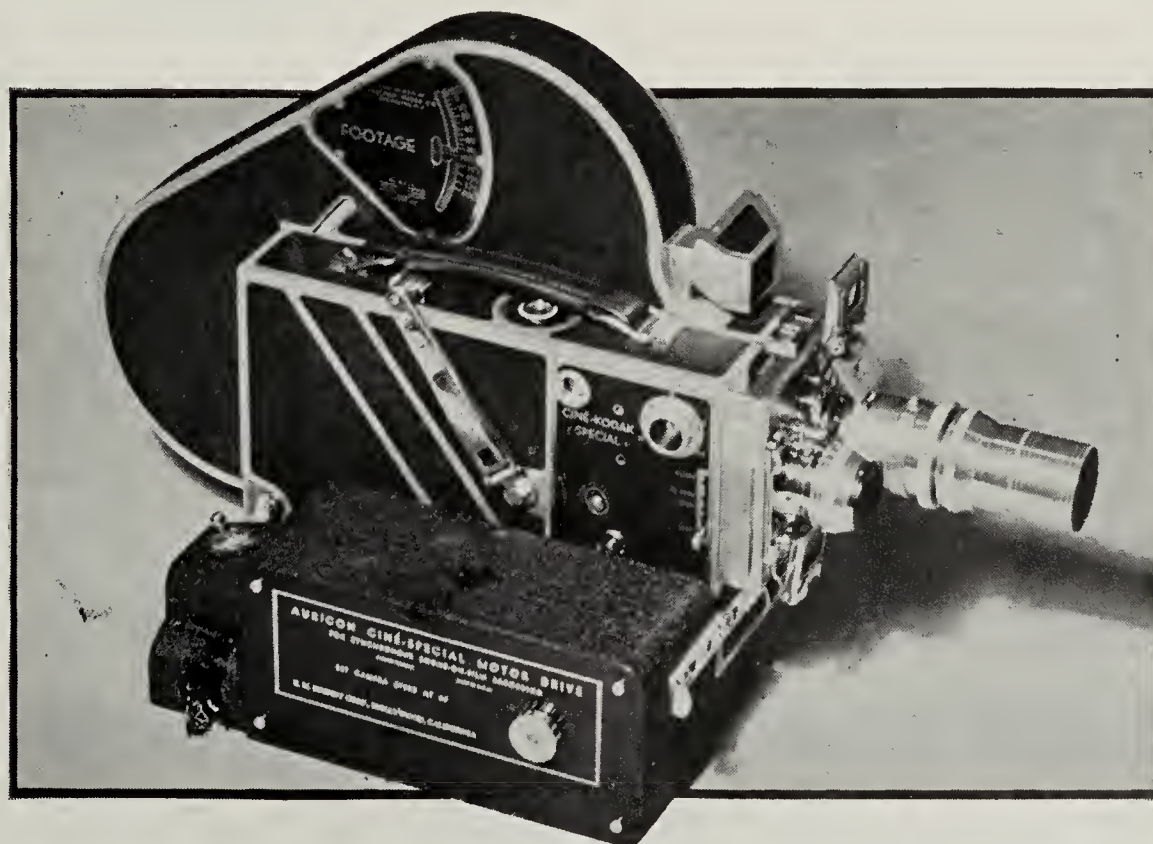
Lamp Pioneer Passes

J. E. Macauley, founder and president of Macauley Manufacturing Co. died in Chicago on August 21st after a brief illness. He was a pioneer in the theatre and studio lighting fields, and widely known in motion picture equipment and engineering fields.

Nunan Cited by Navy

J. Kneeland Nunan, west coast manager of professional motion picture sales for Ansco Division of General Aniline and Film Corp., recently received the highest civilian award given by the Navy—the Medal For Merit. Presentation was made by Vice Admiral J. B. Oldendorf.

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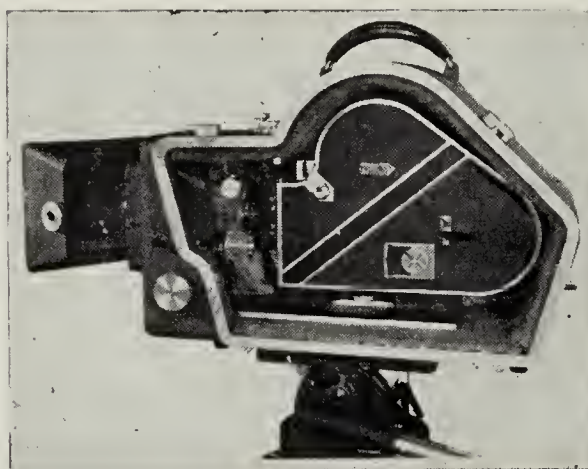
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This new blimp has many exclusive features, among which are follow focus attachment for changing lens calibrations while the camera is in operation, viewing magnifier mounted on top of blimp for focusing while camera is

mounted in blimp, arrangement for opening camera viewing aperture trap for focusing from the outside of the blimp, pilot lights to illuminate lens calibrations and film footage indicator. It takes synchronous motor drive which couples to camera, and has a leather carrying handle mounted at the top.

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The Camera and Production

(Continued from Page 314)

was to do. Director Hecht, who is admittedly short on knowledge of camera technicalities, left this phase of the work entirely to Garmes—with singularly happy results.

The camera approach to "Specter of the Rose" was carefully calculated to extract every ounce of meaning from each scene, to inject action into what is essentially a dialogue story, and to infuse the entire production with a richness and quality identifiable as *production value*.

Camera movement was used sparingly, unobtrusively, and in such a way as to aid the film in its forward movement. The principle camera problem was *dramatic* rather than *photographic*, stemming from the fact that the two leading players (dancers Ivan Kirov and Viola Essen) were enacting their first screen roles and tended to be a bit stiff and awkward at times. It was up to the cinematographer to minimize that awkwardness by means of clever lighting and camera placement. For example, if in one scene a player found that she "didn't know what to do with her hands," the cameraman would move his camera closer or throw the scene into low-key or silhouette in order to detract attention from the hands.

Throughout the film low-ceilinged sets were used, a device that usually promises a major photographic headache. However, cinematographer Garmes, who has previously used low ceilings in such films as "Guest in the House" and "Love Letters," took this handicap in his well-practiced stride. Wherever possible, he duplicated source lighting, thus adding realism to his lensing, while maintaining a certain soft *rotogravure* richness. In this way he succeeded in preserving much of the inherent glamour bound up with the world of ballet.

The settings in the picture, while not elaborate, lent themselves easily to unusual composition and atmospheric lighting. The aforementioned ceilinged sets allowed for dramatic low angles. The ballet scenes, designed with striking simplicity, were handsomely lighted in a graphic style that made full use of black and white contrast.

It is interesting to note that in the ballet sequences the audience was not once shown, although its presence was strongly suggested by off-screen applause. Every angle in this sequence was designed from the *backstage* point of view, well in keeping with the theme of what was, after all, a backstage story.

Speaking of the relationship between the camera and *production value*, Lee Garmes observes: "The camera can produce an aura of quality by pointing up the strong points of the production, while at the same time minimizing its inadequacies. The result depends upon a happy blending of composition, light-

ing and camera movement. I believe in *under-lighting* in order to stimulate the audience's imagination. Correct use of low-key, silhouette and shadow allows the audience to complete in its own mind the idea that the writer and director are trying to put across. To light a set brilliantly in order to show everything at once would destroy that effect."

Thus, *production value* depends in great measure upon correct camera emphasis and atmospheric lighting, as well as upon making the most efficient use of the materials at hand, be they lavish or modest. Careful pre-planning in every phase of production, teamwork between director and cinematographer, plus the engaging of top-notch technicians—all of these factors figure heavily in the impression of quality that reaches the screen. The producers of "Specter of the Rose" have proved that it is these elements and not towering budgets that create *production value*.

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Burnett Guffey, "Johnny O'Clock," with Dick Powell, Evelyn Keyes.

Joseph Walker, "My Empty Heart," with Rosalind Russell, Melvyn Douglas, Sid Caesar.

Henry Freulich, "Mr. District Attorney," with Dennis O'Keefe, Adolphe Menjou, Michael O'Shea, Marguerite Chapman, George Coulouris.

Allen Siegler, "Blondie's Big Moment," with Penny Singleton, Arthur Lake, Anita Louise, Larry Simms.

Hal Roach

John Boyle, "The Fabulous Joe," (Cinecolor), with Walter Abel, Margot Grahame, Marie Wilson.

Golden Gate-Screen Guild

Fred Mandl, "My Dog Shep," with Tom Neal, Lanny Rees, William Farnum.

Metro-Goldwyn-Mayer

Charles Schoenbaum, "Summer Holiday," (Technicolor), with Mickey Rooney, Gloria DeHaven, Walter Huston, Frank Morgan.

Robert Surtees, "Unfinished Dance," (Technicolor), with Margaret O'Brien, Cyd Charisse, Danny Thomas.

Karl Freund, "This Time For Keeps," (Technicolor), with Esther Williams, Johnnie Johnston, Jimmy Durante, Lauritz Mechoir, Xavier Cugat.

Hal Rosson, "Life's For the Loving," with Gene Kelly, Marie McDonald, Charles Winninger, Spring Byington.

Charles Salerno, "The Arnello Affair," with John Hodiak, Frances Gifford, George Murphy.

Robert Planck, "It Happened in Brooklyn," with Frank Sinatra, Kathryn Grayson, Peter Lawford, Jimmy Durante.

Paul Vogel, "Merton of the Movies," with Red Skelton, Virginia O'Brien, Buster Keaton.

Monogram

Henry Sharp, "It Happened on Fifth Avenue," with Ann Harding, Victor Moore.

Harry Neumann, "Mr. Hex," with Leo Gorcey, Gale Robbins.

James Brown, Jr., "Ginger," with Frank Albertson, Barbara Reed.

Paramount

George Barnes, "Emperor Waltz," (Technicolor), with Bing Crosby, Joan Fontaine, Roland Culver, Lucile Watson, Sig Ruman.

Lionel Lindon, "My Favorite Brunette," with Bob Hope, Dorothy Lamour, Peter Lorre, Charles Dingle, Lon Chaney.

Ray Rennahan, "Unconquered," (Technicolor, Cecil DeMille Prod.) with Gary Cooper, Paulette Goddard, Howard Da-

Silva, Cecil Kelaway, Ward Bond, Katherine DeMille.

Daniel Fapp, "Golden Earrings," with Ray Milland, Marlene Dietrich, Murvyn Vye, Bruce Lester, Mikhail Rasumny, Quentin Reynolds.

Ernest Laszlo, "Dear Ruth," with Joan Caulfield, William Holden, Edward Arnold.

Eagle-Lion

Clyde De Vinna, "It's A Joke, Son," with Kenny Delmar, Una Merkel, June Lockhart.

L. William O'Connell, "When the Devil Drives," with James Caldwell, Jan Ford.

RKO

Milton Krasner, "Katie for Congress," with Loretta Young, Joseph Cotten, Ethel Barrymore, Charles Bickford, Anna Q. Nilsson.

Nick Musuraca, "The Bachelor and the Bobby-Soxer," with Cary Grant, Myrna Loy, Shirley Temple, Rudy Vallee.

Roy Hunt, "Trail Street," with Randolph Scott, Robert Ryan, Anne Jeffreys.

Harry Wild, "They Won't Believe Me," with Robert Young, Susan Hayward.

Frank Redman, "San Quentin," with Lawrence Tierney, Marian Carr.

Sol Polito, "A Time To Kill," (Hakim-Litvak Prod.) with Henry Fonda, Barbara Bel Geddes.

20th Century-Fox

Norbert Brodine, "13 Rue Madeleine," with James Cagney, Annabella, Frank Latimore, Richard Conte, Paul von Zerneck.

Arthur Arling, "Home Stretch," (Technicolor), with Cornel Wilde, Maureen O'Hara.

Charles Clarke, "Bob, Son of Battle," (Technicolor), with Peggy Ann Garner, Lon McCallister, Edmund Gwenn.

Ernest Palmer, "I Wonder Who's Kissing Her Now," (Technicolor), with June Haver, Mark Stevens, Reginald Gardiner, Martha Stewart.

United Artists

James Van Trees, "The Fabulous Dorseys," (Charles Rogers Prod.) with Tommy Dorsey, Jimmy Dorsey, Janet Blair, Paul Whiteman.

Fred Jackman, Jr. "Adventures of Don Coyote," (Cinecolor) (Comet Prod.) with Richard Martin, Frances Rafferty.

William Mellor, "Carnegie Hall," (Federal Films), with Marsha Hunt, William Prince, Martha O'Driscoll, Jascha Heifetz, Bruno Water, Artur Rodzinski, Lily Pons, Rise Stevens, Jan Peerce, Walter Damrosch.

Franz Planer, "Vendetta," (California Pictures), with deGeorge, Hillary Brooke, Faith Domergue, Nigel Bruce, J. Carrol Naish.

Mack Stengler, "Whispering Walls," (Hopalong Cassidy Prod.) with William Boyd, Andy Clyde, Randy Brooks, Una O'Connor.

Universal-International

Russell Metty, "Arch of Triumph," (Enterprise) with Ingrid Bergman,

(Continued on Page 342)

Central American Tour

(Continued from Page 330)

city of San Salvador, there is not much more of interest here for the filmer.

Filming in Honduras

Honduras, I would skip at this time, for the hotel accommodations in Tegucigalpa are really terrible. There is nothing very outstanding about this city except a few little crooked streets and the Parque Concordia, but this is really outstanding and has some wonderful replicas of the Mayan Temples. I made some beautiful shots here. Transportation is very difficult in Honduras and the only way to get from one part to the other is by plane, for the country is very mountainous, there are no railroads, and the roads outside the city are very poor.

Nicaragua is another country I wouldn't bother about visiting at present, for if you do, you stand a chance of getting malaria and in addition the hotel accommodations are not too good and the country is very hot and humid.

Volcanos and Ox-Carts of Costa Rica

Costa Rica is your next stop and is a country you will use a lot of film in. The country itself is very beautiful, and there are two volcanos, Poas and Irazu, that make very good subjects for filming. But the outstanding thing in Costa Rica is the decorated ox-carts you see along the roads, with teams of oxen pulling them. Don't forget to go out to Sarshi, for here you can film scenes in the factory where they make and decorate them. They usually have a few finished carts, or as they call them, craetas, that make very good close-ups. Don't forget when you go out to Heredia, to shoot the picturesque swimming pool at Oja De Agua. There is a large waterfall at one end of the pool and all around are beautiful trees and flowers. If you can arrange your visit out here on a weekend, you will get some very beautiful film. I shot 100 feet of this one spot alone.

Filming in Panama

Panama is your next stop. You can now photograph anything here except the canal or the military installations on it. The streets of Panama are worth 300 or 400 feet of film, and Old Panama about another 200 feet if you have lots of film with you. If you go to Colon, and

you probably will, I suggest you drive over the military highway through the jungle, as there are many typical jungle scenes along it that are very good.

There is nothing very much of interest in Colon, except the fact that you will find more night clubs and bars to the mile than probably any other part of the world, for about every second establishment is either a bar or a night club. After you have looked over the town I suggest you go to the Washington Hotel for lunch. This is one of the nicest hotels in Central America. After lunch, take a walk and you will get some nice shots of the swimming pool and the beach.

There you have a brief story of the filming possibilities of the countries of Central America. I hope the information I have given will help you bring back some real pictures of your trip to Central America.

Eastman Kodak Ektachrome

Eastman Kodak has just announced a new color cut film, which will be marketed under name of Kodak Ektachrome. Developed during the war for the armed forces, Kodak Ektachrome will allow for simple and satisfactory processing by the developer himself in his own workroom. According to company announcement, it will be available in all present Kodachrome sheet film sizes, and in types for both artificial and daylight illumination, and will require 90 minutes for complete development.

The new color film is expected to particularly benefit news, syndicate, commercial and illustrative photographers who desire to check on results quickly. Kodachrome professional prints and full-color prints made by the Kodak dye transfer method may be made from Ektachrome film, it is stated.

Eastman Kodak makes no mention of early or distant-future availability of Ektachrome for motion picture purposes. And no one should become optimistic in anticipating the stock in either 35mm. or 16mm. rolls—Eastman Kodak will be the most competent judge of such a move, which naturally will be based both on manufacturing facilities and quality of the product.

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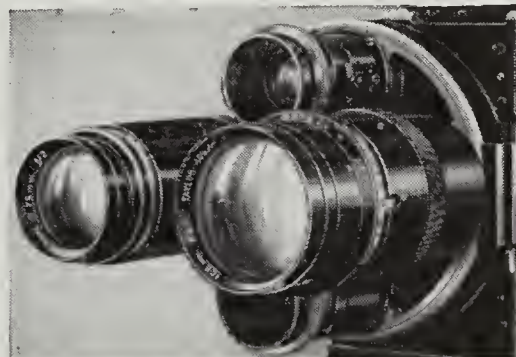
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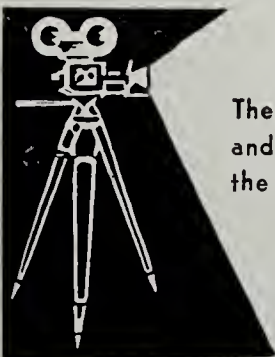
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SMPE Lining Up Program for Hollywood Convention

Under the guidance of William C. Kunzmann, convention vice president, plans for the 60th semi-annual convention of the Society of Motion Picture Engineers to be held in Hollywood October 21st to 25th, are rapidly being formulated. The regulation get-together luncheon will open the convention on opening day, with dinner-dance slated for evening of Oct. 23rd. At the latter, seven citations will be presented to individuals, firms and producers for outstanding achievement in the field of motion picture sound coincident with the 20th anniversary of sound films.

Daytime technical sessions will be held at the Hollywood Roosevelt hotel, and a large proportion of the technical papers on new techniques and equipment of motion picture engineering have already been scheduled.

Telefilm's Eight Years

Telefilm Studios of Hollywood, specializing in 16 mm. production and processing, celebrated its eighth anniversary last month. From initial organization of three, company has grown to include eight departments and permanent staff of 40.

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Current Assignments

(Continued from Page 340)

Charles Boyer, Louis Calhern, Michael Chekhov, J. Edward Bromberg.

George Robinson, "Flame of Tripoli," (Technicolor) with Yvonne DeCarlo, George Brent, Brod Crawford, Andy Devine, Lois Collier, Arthur Treacher, Albert Dekker.

Hal Mohr, "I'll Be Yours," with De-

anna Durbin, Tom Drake, William Bendix.

Warners

Ernest Haller, "Deception," with Bette Davis, Paul Henreid, Claude Rains.

Joe Valentine, "Possessed," with Joan Crawford, Van Heflin, Raymond Massey, Geraldine Brooks.

James Wong Howe, "Pursued," (United States Pictures) with Teresa Wright, Robert Mitchum, Judith Anderson, Alan Hale.

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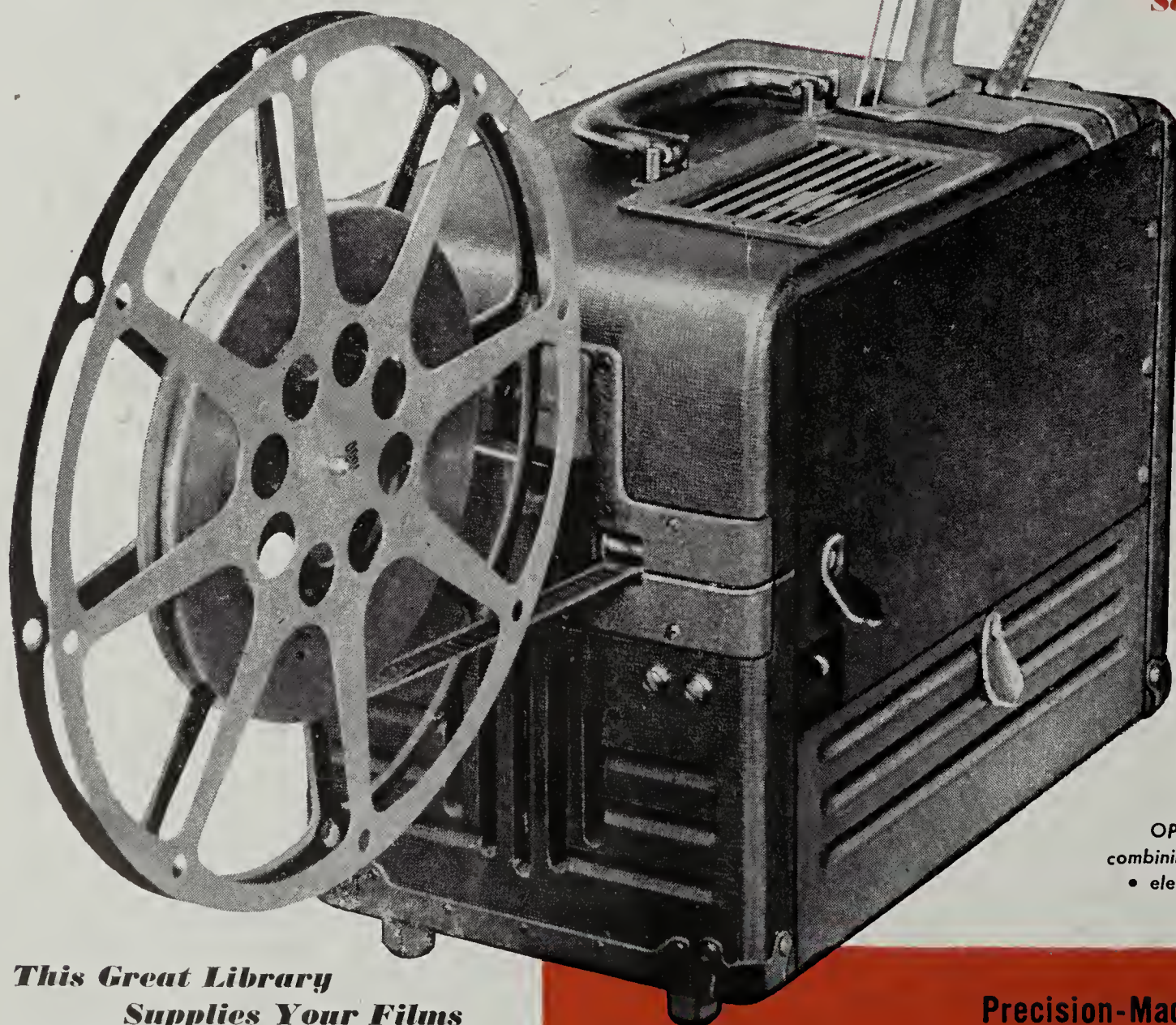
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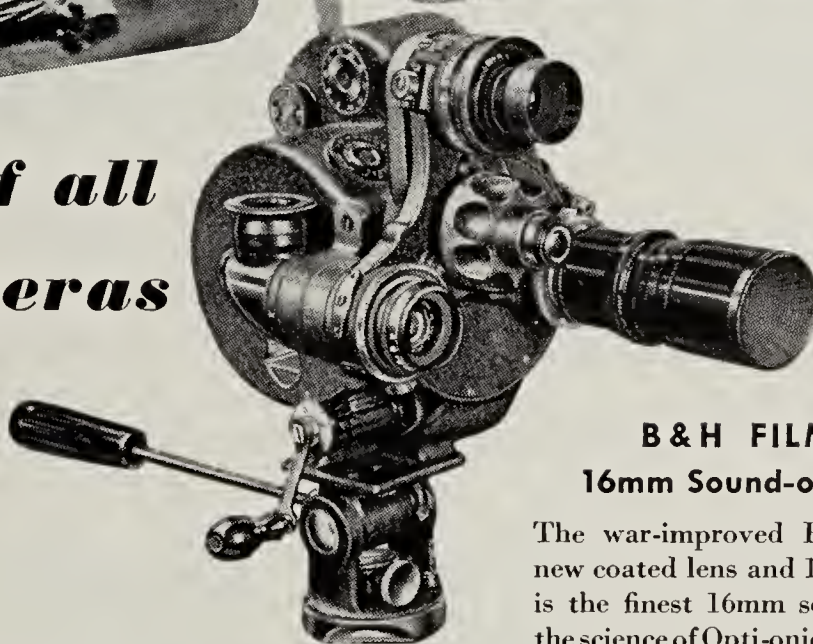
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THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

OCTOBER, 1946

NO. 10

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ON THE FRONT COVER—Director Cecil B. DeMille (holding rope) rehearses a scene with Paulette Goddard for the Paramount Technicolor production, "Unconquered." Director of Photography Ray Rennahan is directly behind DeMille checking the action.



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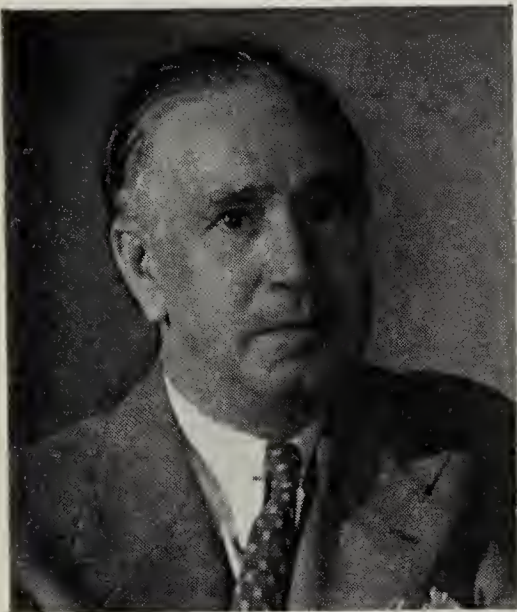
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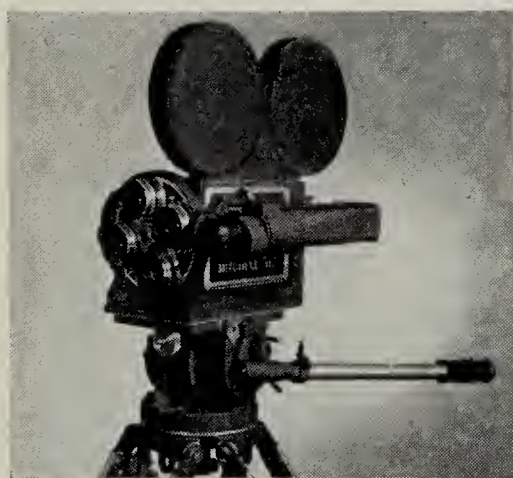


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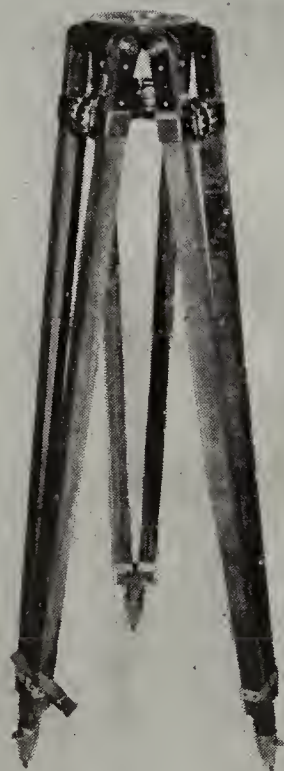
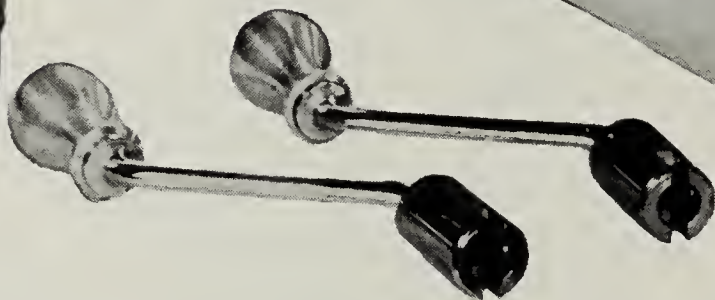


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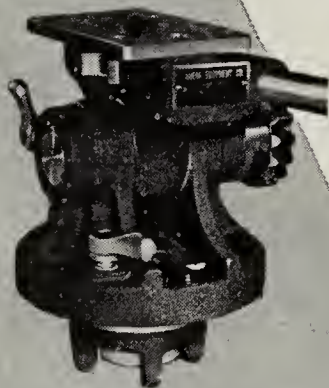
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*for super-smooth
panning & tilt
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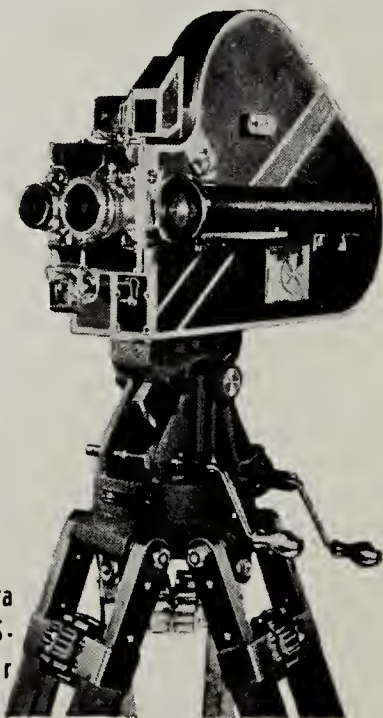


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ACES of the CAMERA

IRVING RIES, A. S. C.

By W. G. C. BOSCO

IN the Metro-Goldwyn-Mayer Studios at Culver City the department of Special Camera Effects is familiarly known as the "Ries Department." In fact, if you were to ask for it by any other name it is doubtful if anyone could direct you. This designation is an unconscious tribute to the personality and talents of the man who, in 1924, founded the department—the first of its kind in Hollywood—and who is still its guiding genius: Irving Ries, A.S.C.

In this department are created all the

"trick" shots and effects that come within the province of the camera, as opposed to process shots and miniatures. And under the personal supervision of Irving Ries passes the entire output of the M-G-M Studios; features and shorts alike. Here the dissolves are made, and the titles superimposed over moving backgrounds, as well as the more intricate camera-magic that created such comment provoking illusions as those seen in the Lon Cheney pictures, the earthquake sequence in "San Francisco," the diminutive creatures that Lionel Barrymore

created in "The Devil Doll," and the spectacle of Charles Laughton carrying his own head on a tray in "The Canterville Ghost," to name but a few.

A lot of pictures have passed through Irving's hands since 1924, more than 1200 in fact, not counting short subjects. And it is safe to assume that no one man in Hollywood has had his finger in, and contributed to so many productions.

Even before 1924, though, Irving had piled up quite a reputation for himself as a cameraman and had enjoyed a career highlighted with that sparkle of adventure that must come to all pioneers to spice their sometimes cheerless way.

Irving got his taste for motion pictures in 1907 when he was serving his novitiate as an usher in an Akron nickelodeon. It wasn't much of a job, but it did give him a chance to help the projectionist crank the projector once in a while. In fact it was that worthy who unconsciously put the young Ries on the road to success. "Boy! I'd sure like to make pictures like that," Irving told him. "Well," the projectionist rejoined, "all you need is a camera."

This sounded like sage advice, and Irving promptly bought a camera; an old Lubin. And spending all his spare money on film and his spare time in assiduous practice he became more and more adept in its use until, in 1911, he felt he could face the cold, hard world as a cameraman.

He elected to start his career in Chicago, and whether the projectionist in Akron had spoken in ignorance or derision his advice proved to be substantially true. The first company to receive Irving's application was one calling itself America's Feature Film Company. They were in the middle of a production entitled, "The Night Riders" and their cameraman had quit; taking his camera with him. So Irving, of course, was hailed as heaven-sent; and after eyeing his camera carefully to be sure that it would work, they put him on the payroll.

He followed this with another epic entitled "Twenty Years in Sing-Sing" which was not made up the Hudson but rather in The Dells of Wisconsin, where the cells in that famous haven of rest were simulated by placing bars in front of the concrete walls of the dam as a concession to the production budget. But the saving there was probably dissipated by an accident that occurred during a subsequent scene and further underlined the hazards a production company must run when it has only one camera.

The scene was set on a railway depot platform, and the action called for the pursued to run onto the platform and board the train as it was moving out. So far so good. Irving got it all in his trusty Lubin. Then the bloodhounds were to burst into view and come bounding along the platform hot on the trail of the gents who had just boarded the train.

That was where it happened. Irving

(Continued on Page 378)

Greatest Photographic Organization In History Shot Bikini Blast

By MAJOR GILBERT WARRENTON, A. S. C.
(USAAF)



Just a portion of the hundreds of cameras and camera crews that were assembled to photograph the atom bomb blasts at Bikini. Many production-trained motion picture photographers from Hollywood were on the expedition.

“THREE atom bombs can flatten Washington, 10 can transform New York into a scrap of rubble”—that much had been conceded some months ago, and only two atom bombs had been used on land targets in combat.

With time, tests and experience, it is difficult to conceive the frightful consequences of atomic bombing.

To arrive at an appraisal of the effects of an atom bomb on naval ships—and to scientifically register various factors of the blast itself and after-effects—Washington ordered a test to be made on an array of war ships; and to accomplish this, Joint Army and Navy Task Force I was activated. Time, early in May (before it was postponed to July 1st); place Bikini atoll in the Pacific Ocean.

In planning and setting up the operation — one of the most stupendous peace-time experiments in the entire history of the world—motion pictures became a most important factor. It was early decided that, only through full and complete records on film could the initial blast and the many and varied results be studied by high military leaders and research scientists. Result was the assemblage of the fullest and most complete photographic unit of motion picture experts ever brought together—along with many types and kinds of cameras.

For air operations, General Arnold, then Chief of the Army Air Force, selected General Ramey, Commanding Of-

ficer of the 58th Wing, which had the very heavy bombers required for the task. From the Wing and his personal knowledge of combat experience, General Ramey selected personnel. Pilots, NAV, bombardiers, radar, radio, ground and air crews, etc.—were hand-picked from all parts of the United States and from virtually every air force overseas. Only the cream of the air force was selected and pulled into Task Group 1.5.

Assembly point was at Roswell Army Air Field, Roswell, N. M. Here Headquarters Task Group 1.5, Operations Crossroads, was established. Here too, was the terminal of a specialty setup air line, “The Green Hornet,” which ferried the tremendous load of personnel from all corners of the globe, and handled practically all of the air-freighted equipment assembled at that point for Crossroads. The Green Hornet insignia became as familiar across the Pacific air-planes as it did all over the United States.

One of the principal requirements from Task Force was the complete aerial coverage of the atomic explosions at Bikini—in addition to making historic and documentary motion pictures. There could be no mistakes—a perfect and complete photographic record of the operation was necessary for analysis and evaluation.

To assemble, organize and train such an Air Foto Unit—and in so short a time—was a big task. This job, with all its problems and ramifications, was handed to Colonel P. T. Cullen by General Ramey.

Colonel Cullen, a veteran Air Force pilot-photographer, had experience stretching back to 1929 when one of his first assignments was to photograph the Graf Zeppelin over San Francisco on its epochal flight around the world. He has mapped thousands of miles of Alaskan frozen wastes, pioneered over the Andes of South America, made the initial flight on the boundary survey between Peru and Ecuador, and participated in 52 bombing missions over Europe.

To this new assignment, which would be the most elaborately-photographed event in history, he brought a wealth of experience, background, and know-how; together with the realization that the success of the project in obtaining vital information depended on the complete film coverage which would provide the permanent records required.

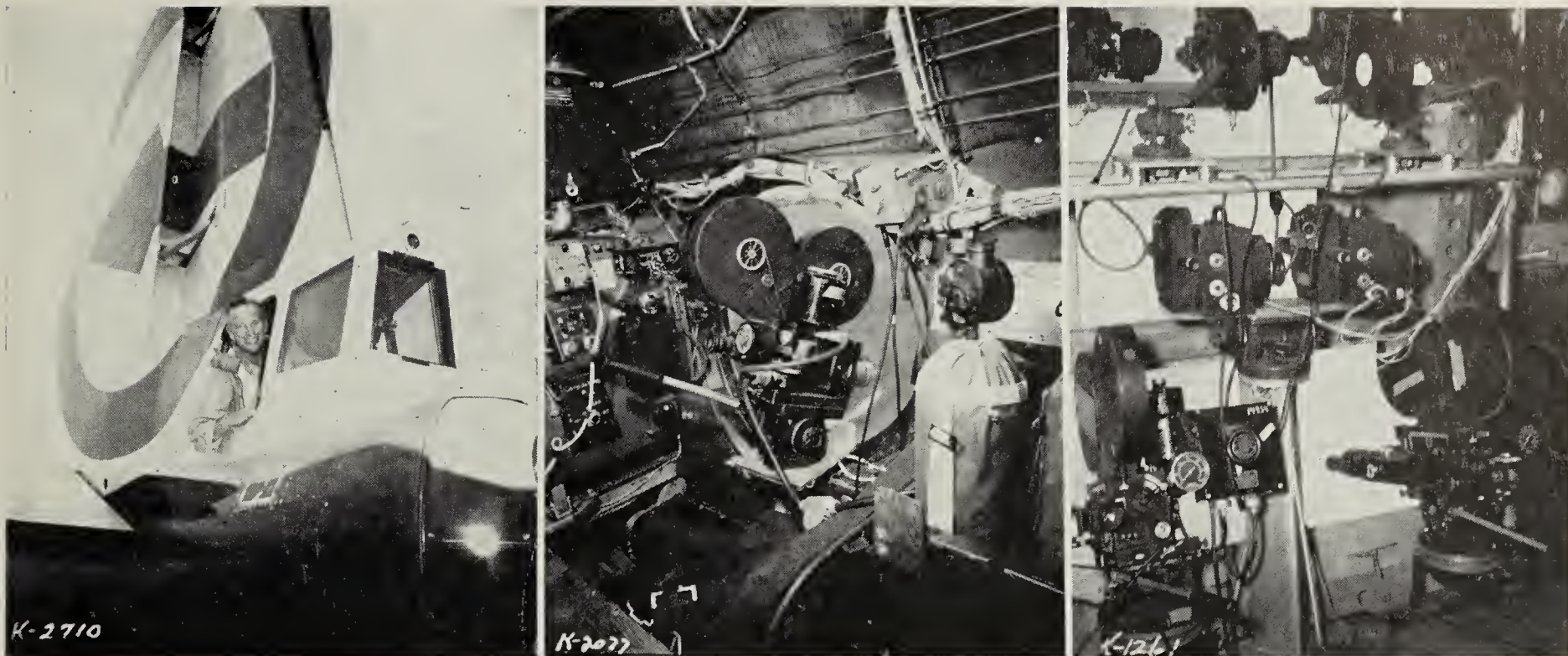
The magnitude of Crossroads required the best photographers there were—not only for the usual recon photo work, but spectographic photo records, radar pictures, ultra-high-speed motion pictures, television pictures, photographs to be made via radio remote control in the drones (radio-controlled aircraft) historic and documentary motion pictures in both black-and-white and color. Such wide activities in photography necessitated most complete and thorough organization for final accomplishment.

Time was a most important factor. Time to get personnel—time to find and draw equipment—time to modify airplanes and get camera mounts—and time for training the personnel.

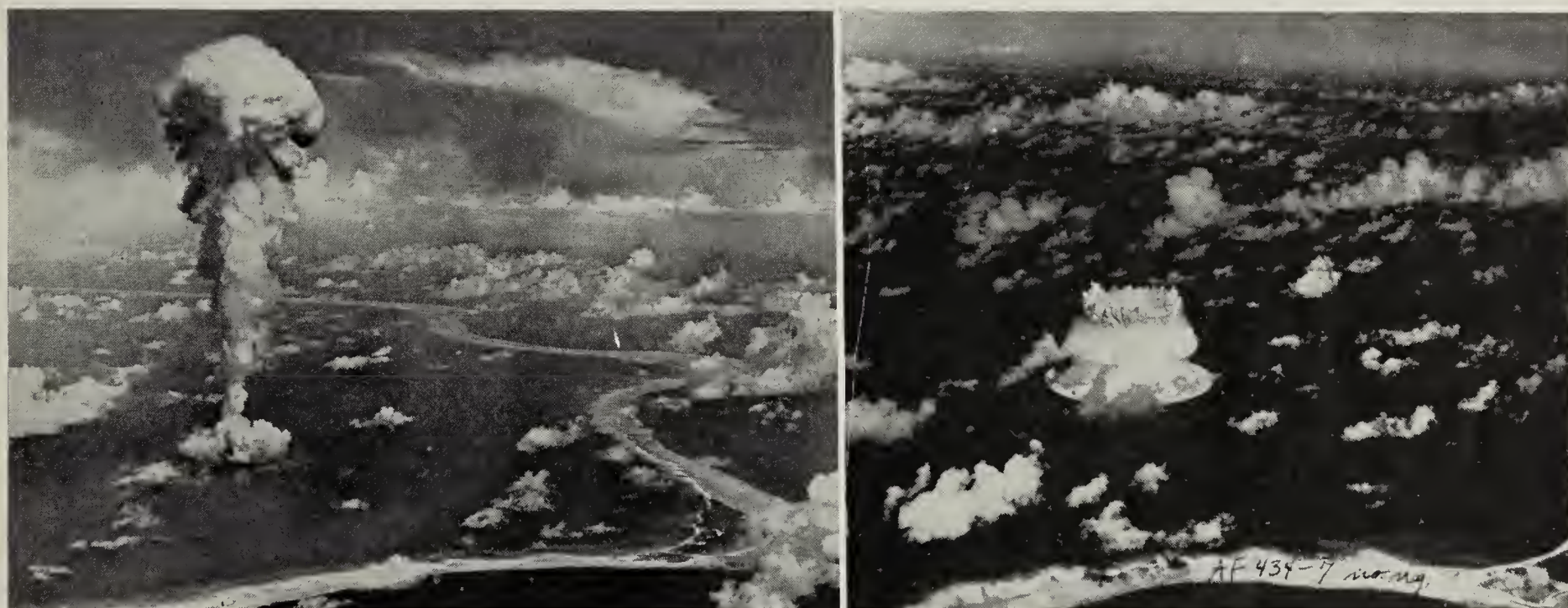
To his staff as Deputy Commander for Task Unit 1.52 (as the Air Foto Unit was designated), Colonel Cullen brought Lt. Col. Richard S. Leghorn, MIT graduate, and former physicist for Eastman Kodak Company. Colonel Leghorn, also a pilot-photographer, had completed nearly five years in the Air Force and was many times decorated—Silver Star, Distinguished Flying Cross, Soldiers’ Medal, Air Medal with seven clusters, Croix de Guerre, Presidential Citation, and six campaign stars—all in the European theatre of operations. Having returned to civilian life, he was literally drafted for “Crossroads.”

Major Charles F. Wilson, Photo Officer and long-time associate of Colonel Cullen, was assigned the responsibilities for the photo laboratory to be set up in

Continued on Page 383)



Major Warrenton in tail camera position of a B-29 blast gauge instrument ship (left), which went in four miles off the target and seven miles slant range from the area to photograph the blast in color. Middle: Installation of a Mitchell camera in a photographing plane. Right: one of the many arrays of cameras set up in C-54's.



Characteristics of the above-water (left) and below-water (right) atom bomb explosions; both taken several seconds after the blast. Note that ships are not visible in the target area of Bikini harbor due to radio-activity haze which apparently had some effect on the film.



Blast of the atom bomb, micro-seconds after the detonation over Bikini, created a light of 1,000 suns. Camera was stopped way down and heavily filtered to catch the micro-second flash. Right, landing of Dave's Dream after dropping the atom bomb. Note the crews of Air Foto Unit cameramen photographing the momentous event.

AN ACE HEADS EAST

By HERB LIGHTMAN

COME early fall one of Hollywood's foremost "Aces of the Camera," James Wong Howe, A.S.C.—expects to pack his toothbrush and viewing-glass, climb aboard a trans-Pacific clipper, and take off for the far-eastern shores of China. This will be no mere pleasure jaunt, but the first definite step toward the realization of a dream Jimmy Howe has cherished for years, a dream of some day helping his ancestral land to become a first-rate power in the world of the motion picture.

Jimmy is going abroad to supervise the development of several important film enterprises to be organized on Chinese soil, foremost of which is a completely equipped commercial processing laboratory and cinema research center. This lab—headed by Mr. Walter Woo, graduate chemist and film specialist—will form the nucleus of the new Chinese film industry, providing complete technical facilities for the development and processing of motion picture stock, and acting as a research institute for the industry as a whole. It will offer aid in the filming of pictures, the standardizing of theatre equipment and illumination, as

well as the shooting of miniatures and special effects.

Explaining the scope of the new lab, Jimmy Howe says: "Our aim is to some day bring the Chinese film industry up to American technical standards. New studios and theatres will have to be built, new equipment imported, and many more technicians will have to be trained. It's a long-range plan, but we're working with a definite goal in sight."

Limited Chinese Films

The present-day Chinese film industry is still in the early stages of pioneering. There are approximately ten motion picture studios that produce a total of about 125 pictures a year. But there are a mere 400 theatres to service a population of more than 450 million people, and these theatres are located only in the big cities. In the small towns and villages scattered throughout the vast interior of China, movies are virtually unknown; instead the people rely on the primitive shadow-play for entertainment.

Up until now, growth of the industry has been restricted because there was no central agency to standardize technique

and promote research. The new laboratory will provide these services and thus benefit the entire industry. In addition it will offer a new service to aid U. S. film-makers. Hollywood studios currently send as many as seven prints of a feature picture to China for distribution, paying individual duty and export costs on each print. Howe has discussed a plan with company officials whereby studios will send just one lavender print from which the Chinese lab will make a duplicate negative and as many release prints as are necessary. Savings to the film companies on labor, duty, and export costs should be substantial.

Films For Mass Education

But the commercial lab is only one part of the vast plan now underway to make China film-conscious. There is a formidable job of mass education to be done and the motion picture is the perfect medium with which to do it. Dr. James Y. C. Yen, famous Chinese educator, only recently left Hollywood after conferring with Jimmy Howe on the subject of a widespread visual education program in China. On this project, also, Howe will act as a close advisor when he arrives in the Orient.

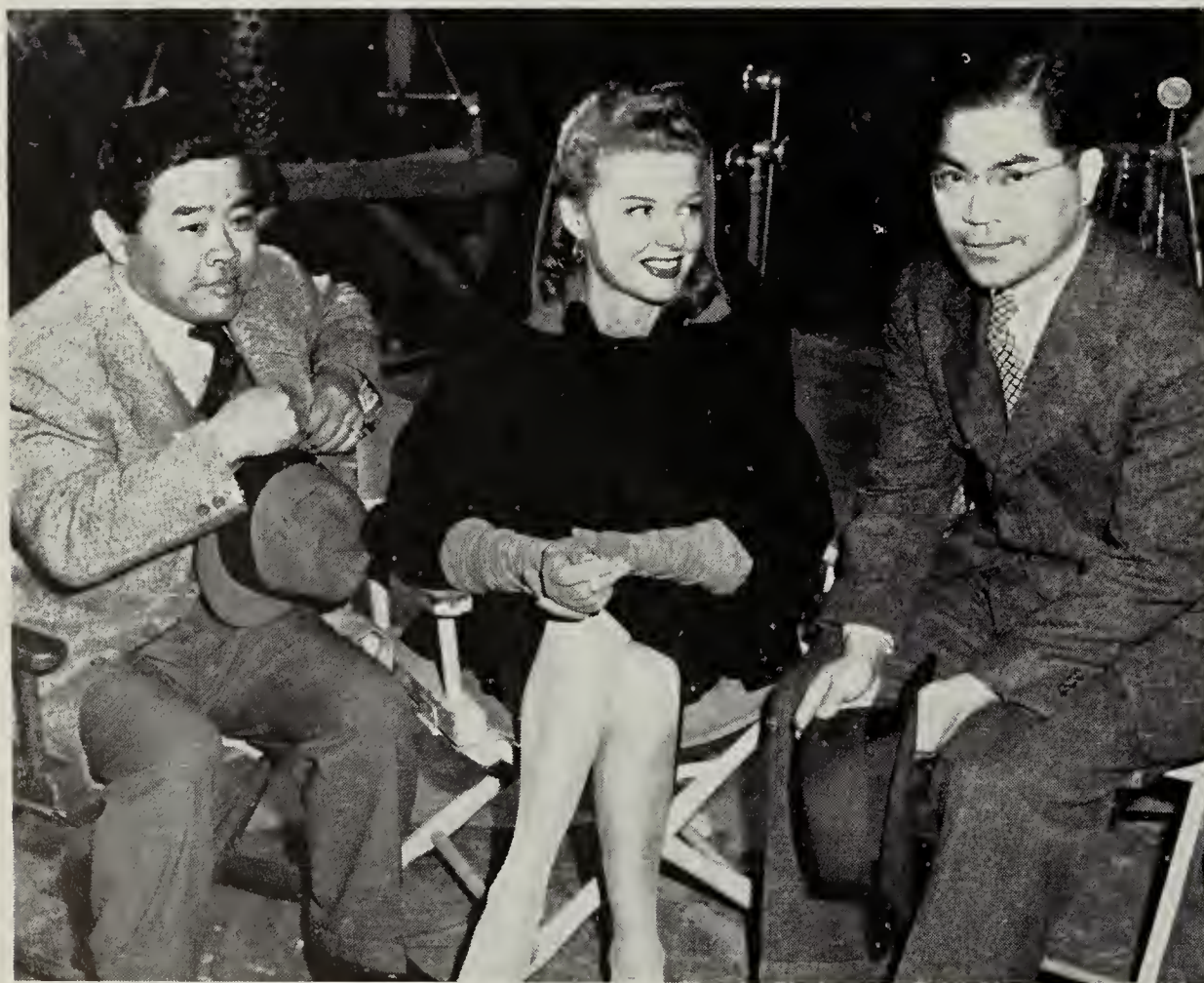
Dr. Yen is well-known for his successful mass education program which has brought learning to 60 million previously illiterate Chinese within the last two decades. Dr. Yen boiled the formal Chinese alphabet of 30,000 intricate characters down to a basic alphabet of 1,300 simplified characters, and taught millions of illiterate coolies to read and write after only 96 hours of actual instruction. Generalissimo Chiang-Kai-Shek granted him a million dollars to carry on this work, and the sum has been greatly increased by private contributions.

"We are not forsaking our mass education program, but instead are augmenting it through the medium of visual education," Dr. Yen stated prior to his departure. "During World War II we witnessed the tremendous power of the motion picture as an educational force. We saw precious training time cut to a minimum through the wide usage of films. It is our intention to bring educational pictures to every area of China, particularly to those areas where the motion picture is virtually unknown. This will be accomplished through the exclusive use of the 16mm. camera and projector equipment."

The first films made under this program will be for the purpose of continuing the fight against illiteracy, still China's foremost stumbling block in the way of national strength and unity. When this phase of the educational plan is well started, other films will be made on a great variety of academic subjects. Chinese educators foresee a situation in which the bulk of classroom instruction for every grade of school will be carried on by means of 16mm. sound films and film strips.

Government Backs Program

The importance of this planned visual education program is evidenced by the



James Wong Howe, A.S.C., Anne Sheridan, and Walter Woo, graduate chemist and film specialist—shown chatting between takes of the Warner Bros. picture, "The Sentence." Mr. Woo will head the huge commercial film laboratory to be built in China.

fact that the Chinese government has sent a young Chinese student to observe all phases of American motion picture production. This young man—Tieh-Seng Chen, by name—has been in the United States for several months during which time he has been studying motion picture equipment and maintenance at the Bell & Howell plant in Chicago; documentary filming with the Dept. of Agriculture Motion Picture Division in Washington, D. C., and techniques of educational film production at the Harmon Foundation in New York. At present he is assigned to Warner Bros. Studios in Burbank, California, where he is constantly on the set observing James Wong Howe at work and learning the intricacies of American photoplay production.

Howe, himself, is very enthusiastic about the new visual education program and he will occupy an important advisory position in its development. He is happy to see that younger men are being encouraged to work in the program. If present plans materialize he may take along several young technical assistants from Hollywood to aid him in setting up a topnotch film industry in China.

Howe Veteran Photographer

For Jimmy Howe this new venture abroad will be a crowning episode in a long and colorful career. In the quarter century that he has spent shooting motion pictures, he has become something of a Hollywood legend. Everyone knows how, having been born in Kwantung province, China, he came to America with his parents when a child; how in Pasco, Washington, he went to live with a well-to-do Irish family that had taken an interest in him; how he started as a prop boy and worked his way up to become one of the film industry's foremost camera artists.

He came to Hollywood in 1916 after having spent several years knocking about as a professional boxer. One day he happened to see Mack Sennett shooting a picture in a Los Angeles park. He was immediately fascinated by this new and exciting industry and hung up his boxing gloves then and there in favor of a camera. But it was a long, hard grind and he had to start as apprentice to a commercial photographer, finally landing a job in the studios as a ten-dollar-a-week camera assistant. Meanwhile he studied, asked questions, experimented. He slept on the sets at night to save enough money to buy his first camera, and took snapshots of the stars to gain more experience.

Promotion via Still Picture

Finally his big break came. In those days the highly blue-sensitive orthochromatic film that was in use recorded blue tones as white. Cameramen were having a good deal of trouble trying to get Mary Miles Minter's light blue eyes to register on the film. One day Jimmy took a "snapshot" of Miss Minter on the set, and when the film was developed she was delighted to see that her eyes



Tieh-Seng Chen, young technical student, looks on while James Wong Howe, A.S.C., demonstrates the intricacies of a cloud-effects screen. Chen was sent to Hollywood by the Chinese government to study American motion picture production.

had photographed in a becoming dark tone. She made him her cameraman on the spot, and then he had to sit down and rack his brain to puzzle out the reason for his photographic phenomenon. "I thought and thought about it," Jimmy recalls, "then I finally remembered that when I photographed Miss Minter there had been a black screen just in back of the camera that threw a dark reflection into her eyes. After that I always shot her closeups with the camera lens peeking through a hole in a black curtain. Everytime I wanted to give her a camera direction I had to lift up the curtain, stick my head underneath and peer up at her."

Rapid Progress

From that start his rise in the film industry was slow but steady. He learned his camera-craft thoroughly. Ever the student, he was eager to try new ideas, develop unusual effects, experiment with more advanced techniques. He was among the first to try low-key lighting, and he found it hard to break down professional opposition to this dramatic style of set illumination. His fellow cameramen complained that low-key was impractical, that the audience would not be able to see the actors, that it was too radical a departure from the set standard. When Jimmy still insisted that he had something there, they pinned a good-natured nickname on him; they called him: "Low Key Howe." He laughed with them, but went on to improve and finally perfect the rich, velvety style of photography that later distinguished such pictures as

"Viva Villa," "Algiers," "Prisoner of Zenda," "King's Row," "Air Force," "My Reputation," and a great many others.

During his thirty years in the film industry, Jimmy has managed to preserve a finely balanced set of values. He works hard at his craft, lives simply, stays in trim with swimming and golf, and keeps a ready sense of humor to smooth over life's rough edges. It is that humor that keeps every set on which he works aglow with good fellowship. He even enjoys telling a joke on himself. One of his favorite yarns concerns an incident that happened a few years ago just after he opened an exclusive Chinese restaurant called "Ching How" out in the San Fernando Valley.

It seems a certain publication wanted to run a feature on the place and they sent their own photographer along to take a picture of the outside. Said photographer happened to be of the old undaunted school and he calmly planked his camera down smack in the middle of Ventura Blvd. which was, at that moment, teeming with rush hour traffic. Soon cars were piled up for blocks to avoid hitting him.

Right about then, Jimmy Howe happened to look out the window of his restaurant and saw this intrepid cameraman dodging fenders and bumpers. Not wishing to be a party to a traffic homicide, he went out and tactfully suggested that the photographer put a wide-angle lens on his camera and move in closer to the curb. At this, the offended cam-

(Continued on Page 374)

THE attempt to control day skies by the use of filters on Technicolor cameras has reached a new technical perfection in David O. Selznick's "Duel in the Sun," according to Ray Rennahan, veteran Technicolor cinematographer.

"We created mood skies by filters and were very successful with the endeavor. By filters we created scenes that heretofore have been largely the result of work done in the film labs, or the special effects department," Mr. Rennahan said.

The use of filters in Technicolor cameras to create these mood shots has always been a minor endeavor because such a shot is usually planned as a matte shot and most cameras have not been equipped with that type of filter.

"For instance, during the 'Duel in the Sun' location, a scene between Jennifer Jones and Joseph Cotten, Mr. Selznick desired a sunset sky as background. So we experimented with filters and the results show a beautiful gold sky," the veteran cinematographer said proudly.

It was in 1921 that the first Technicolor picture, "The Toll of the Sea," was made using a single-lense beam-splitter primitive camera. That was when Mr. Rennahan began his Technicolor work, and he has been deeply engrossed in it ever since, with such notable color motion pictures to his credit as "Gone With the Wind," "For Whom the Bells Toll," "Lady in the Dark," and "Thousand and One Nights." Today's Technicolor camera weighs more than 700 pounds and costs in excess of \$40,000.

The Technicolor three-strip camera is now used which requires great amounts of special equipment. Besides a director of photography, it requires an immediate crew of four persons. The camera must be continually checked by a technician to see that no foreign material is found in the prisms or on the film. Dust causes color spots or scratches, and it is the technician's job to check after each okay shot to see that everything is in order. If not, the scene is shot again for protection.

While no radical change has taken place in Technicolor, the refinement of the process goes on year by year and according to Mr. Rennahan "Duel in the Sun" offers the best Technicolor scenes ever to be seen on the screen.

"I didn't think anything could top the producer's 'Gone With the Wind,' but in 'Duel in the Sun,' he has combined magnitude with technical perfection, and the result adds up to one of the best pictures of all time. Mr. Selznick is more camera conscious than any other producer in town. He concentrated on unusual angles and unusual sets and thought nothing of tearing out a wall to achieve a dramatic camera angle.

"In one instance, he wanted a shot of a man driving a spike in a railroad tie. He didn't want a straight front or side view, he wanted a low shot. So a bull-dozer was called into action, and an excavation was made deep enough to



New Filter Technique For Color Cinematography By Ray Rennahan, A. S. C.

accommodate the camera and crew, and the scene was shot. It was a good shot too," he added. Mr. Rennahan has no decided preference for indoor or outdoor sets.

"Many directors of photography prefer to shoot indoor scenes and then will hire someone else to take over on locations. It doesn't make any difference to me. I consider each motion picture assignment a challenge, and it is satisfying to know that I have experience in practically every type of photographic difficulty. In Arizona, we ran into the problem of sand particles, which gave scenes a hazy tone, so with the help of the Technicolor laboratory we devised special filters which surmounted

the difficulty and resulted in some of the best Technicolor location shots to my knowledge."

The magnitude of "Duel in the Sun" was best exemplified by Mr. Rennahan in explaining the huge sets which marked many of the key scenes.

"The first set of the cafe scene used in the prologue was already and waiting for Mr. Selznick's okay. When he did see it he wanted something bigger. The set was finally made as big as the stage itself, and part of it was built in the street between the sound stages. The scene called for a night shot, so huge framework was erected and covered with tarpaulin. The camera was

(Continued on Page 381)

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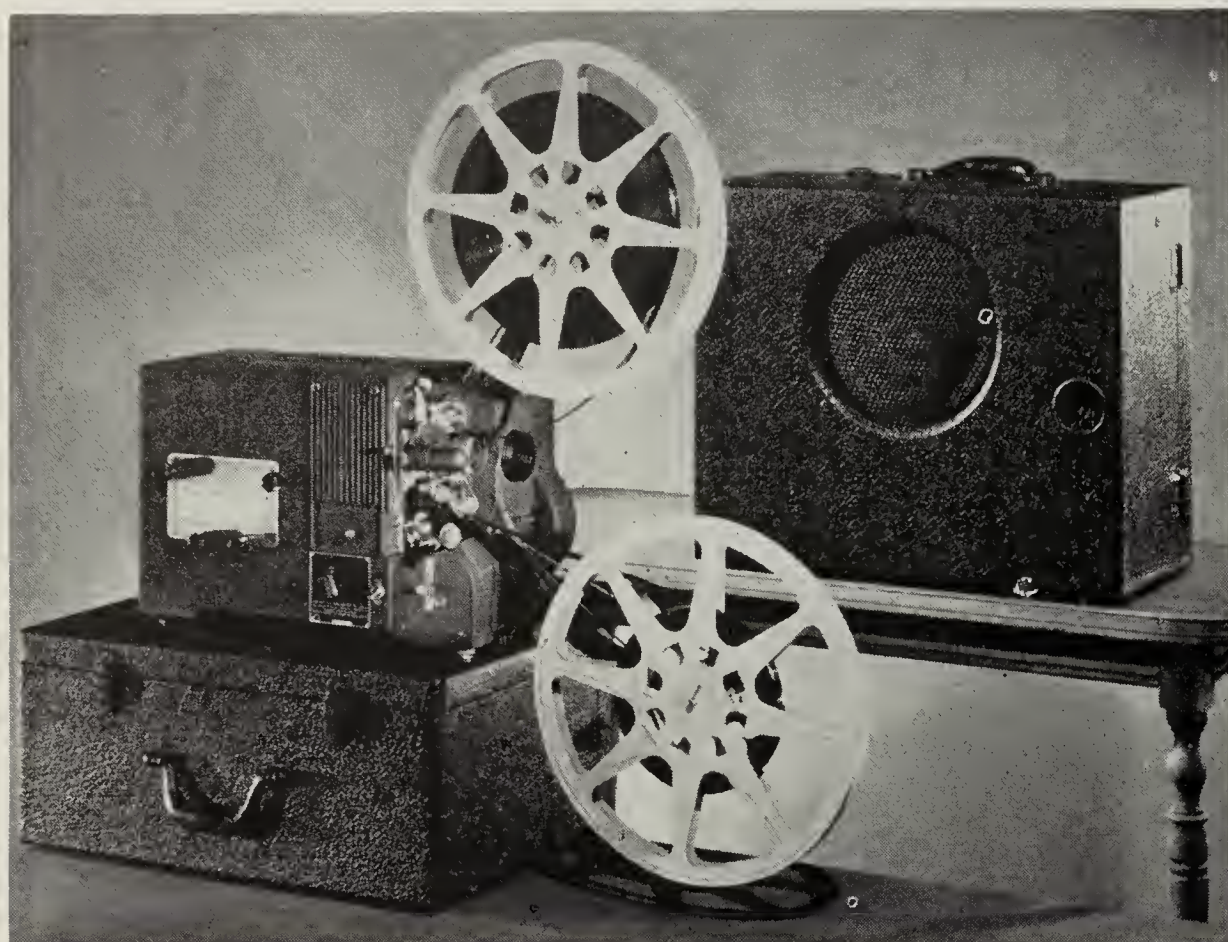
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Eastman Kodak's New "FS-10-N" Model In Two Units



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Case one—the speaker unit—weighs approximately 25 lbs. And case two, the projector, weighs approximately 47 lbs.

Both cases are finished in black boar-grain Kodadur.

Easy to set up and easy to use, each unit is readily packed and unpacked. The speaker unit need merely be plugged in and located near the screen. The Kodascope may be set up in the case with the cover swung open or may be removed entirely, and seated atop the case, or alone on a table or other base. Everything needed for a showing, except the screen, has a place in either the speaker or projector case.

Deliveries of these new two-case units will be made to dealers as fast as production facilities permit.

New Cinematographer Handbook Ready

Latest edition of the American Cinematographer Hand Book and Reference Guide is now off the press and ready for distribution. The edition, fifth in the 11 years of intensive and minute compilation by Jackson Rose, A.S.C., has been greatly enlarged with cinematographic facts and tables over previous issues, and is an absolute "must" for both professionals and amateurs operating in the 25mm., 16mm., 8mm. and minicam fields of photography — both black-and-white and color.

Rose, a veteran in motion picture production photography of 35 years, originally started to collect the material for his own use and information, and soon discovered that so many professional photographers requested access to his files that he published his first edition in 1935. But the changes in film emulsions, photographic materials

and other factors necessitated issuance of further editions. During the war, the photographic divisions of all branches of the United States services accepted the Handbook for guidance and use.

The fifth edition is larger and more comprehensive than its predecessors. Sections are devoted to basic data on film of all kinds (35mm., 16mm., 8mm.) in both black-and-white and color; filter factors; cameras, lamps; exposure meters; and other materials currently on the market. New sections have been added to cover 16mm. sound and silent projectors, 8mm. silent projectors, still minislide projectors, new copying and enlarging charts for miniature cameras, data on photoflash and photoflood lamps, and the leading color processes. In addition to a wealth of pertinent data and charts, the fifth edition carries a number of color illustrations.

United 16 Society Provides Scripts

In line with its plans for widest assistance and cooperation of its amateur 16mm. members, the newly-formed United 16mm. Society, Inc. will make available to such members a number of complete production shooting scripts which can be closely followed in making pictures for personal enjoyment.

As Daniel Clark, A.S.C., one of the founders of United points out, "One of the most important services that can be rendered the advanced amateur movie enthusiasts at this time is that of scripts by which pictures can be made that carry tempo and human interest. Many amateur 16mm. cinematographers have advanced beyond the stage of shooting scenery, flowers and members of their families. They now want to plan and prepare stories and scripts for their film activities; and we will assist in these aims of our members. The scripts which are available are professionally-setup in every phase; and are deliberately designed for the amateur enthusiast to conveniently make in his own locality, regardless of amount of equipment and accessories that might be available."

Clark and other founders of United 16—all with years of professional experience in cinematography around the Hollywood studios—have made an intensive study of the 16mm. field for several years. Result is the formation of an organization intended to foster the progress and activities in that branch of the industry through a central agency which can provide advice and council to members.

Telefilm Issuing Stock for Expansion Plans

Rapid growth of Telefilm, Inc. of Hollywood, requires added financing of \$1,500,000 stock issue to carry on huge expansion plans mapped for the coming two years.

Telefilm, which currently occupies two buildings devoted to 16mm. film production and processing, has mapped plans which will embrace a new recording stage, shooting stage, cutting rooms, added laboratory space and facilities, and an enlarged animation department.

Fielding Coates Passes

Fielding C. (Phil) Coates, 52, died September 7th following a brief illness. For the past 20 years, he was a partner in the firm of Mole-Richardson Company of Hollywood, and during that period was responsible for the designing and engineering of modern lighting equipment for studios and film production. He originally started in the film industry as chief electrical engineer with Vitagraph studios in Brooklyn more than 30 years ago.

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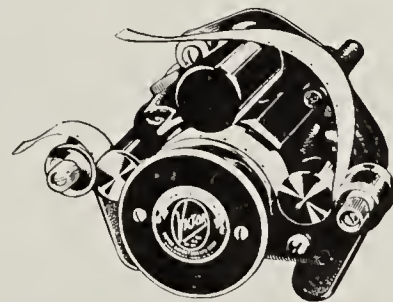


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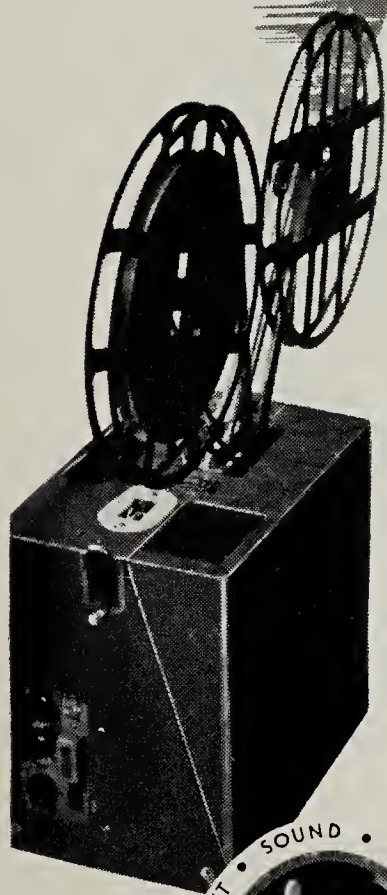
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MAKERS OF 16MM EQUIPMENT SINCE 1923

IN THE last installment of *The Cinema Workshop* we discussed *Production Planning* and pointed out ways in which the many varied problems of picture-making might be minimized by careful pre-planning.

Let us suppose, then, that all of this preliminary work has been done. The *shooting schedule* has been set up and approved. Each technician knows exactly what his responsibilities will be during every phase of filming. All the elements of production—human and mechanical have been assembled. Pre-shooting conferences have ironed out all predictable quirks.

The moment for which we have been planning has arrived. We are now ready to begin shooting. It is at this moment, also, that responsibility for the film descends mainly into the hands of the one man who will actually "pull the strings" of production. This man is the *director*, and it is with his problems and duties that we shall concern ourselves in the following discussion.

The Role of the Director

On a Hollywood sound stage the director is a highly specialized technical executive whose job it is to orchestrate all of the various phases of production into an harmonious cinematic whole. He has a staff of assistants each of whom does his bit in accomplishing this result. Specialization is everywhere.

In sharp contrast to the Hollywood director is the amateur film-maker who is very often his own producer, director, cameraman and star. He usually prefers to do all of these jobs himself, not realizing that it takes something of a genius to do everything well. Actually, the serious advanced amateur and semi-professional can profit by following Hollywood's plan of definite specialization. It is extremely difficult for one man to rehearse the action of a scene, then hop behind the camera and film it, paying attention to focus, exposure, composition, lighting, and other photographic mechanics—while trying at the same time to see that pace, tempo, dialogue and action are also correct. For this reason, one man should direct the scene and another should photograph it.

We are at this point mainly concerned with the role of the director in production. It has been said that the director is "the inevitable star behind every film," and in a sense this is true, because it is his individuality that is the activating force of the entire project. Until the script reaches the director's hands, the proposed film is merely a collection of abstract ideas statically inscribed on paper. It is his job to translate these ideas into kinetic action.

For those who may think that the position of the director is solely one of honor and glory, let it be emphasized that he also bears a tremendous weight of responsibility. The major burden of breathing quality into the film rests upon his shoulders. Although he may not actually have direct *control over* every single phase of production, each phase is slanted according to his overall conception

of the picture, and bears the trademark of his style.

When the film reaches the screen it is the director who must answer for the quality of the product. If the result is good, it is a foregone conclusion that everyone working on the film will draw at least his fair share of the praise. But if the picture is unsuccessful, it is usually the director alone who is blamed for its inadequacies.

Because he is the most responsible technician on the film, then, the director's importance as the guiding hand of the production cannot be too strongly emphasized.

What It Takes to Direct

The question arises: "Can just *anyone* direct a film?" If you are thinking in terms of home movies the answer is probably "yes," for (no matter how poor the camera technique) if this kind of footage contains sufficient shots of little Susie, age three, cutely clutching her teddy bear while leering into the lens, the home folks are sure to love it. But we are here more concerned with the problems of the *advanced* amateur and semi-professional, and so our answer to that question must be: "No—just *anyone* cannot effectively direct a motion picture."

It takes a special kind of talent and personality to direct a film; and it takes an unusual perspective. The task of the director is to select certain elements of a realistic situation and present them in a forceful, significant pattern on the screen. Therefore he must be highly sensitive (or better yet, *responsive*) to the dramatic values of life. He must have a very real and enthusiastic interest in people, for it is their doings that go to make up his action. Without being melodramatic, it can be said that a director must have a kind of cinematic *sixth sense* in order to be able to sniff out a dramatic situation and reproduce its high points on the screen.

The really efficient director closely observes what goes on in the world about him and takes mental notes of the elements that go to make up each situation, especially the unusual ones. Using his script as a basis from which to work, he draws upon this storehouse of *atmosphere* and uses it to effectively pad the bare bones of action and dialogue recorded in the script.

Above all, he must develop a strong

sense of continuity, a feel for smooth connection between scenes and sequences. This is especially important where the script is to be shot out of sequence and consecutive scenes are filmed days or weeks apart. In this type of "fragmentary" shooting, the smooth flow of action as set down in the screenplay is disrupted, and the director must strive to retain in his mind a clear concept of the whole story pattern, even while he is shooting it in bits and pieces. He must know where every part fits into the celluloid jigsaw puzzle.

But more than merely knowing where every scene goes, he must be able to convey the sweep of continuity to his players, for actors, intent only upon interpreting the particular bit of action at hand, cannot be expected to keep each scene straight in its narrative order. They therefore depend strongly upon the director to blend each of their scenes smoothly into the cinematic whole, since he sees each scene in its ultimate setting and knows exactly how the story is to develop.

The director can enhance his sense of continuity by studying his script thoroughly, by getting to know the story so perfectly that he senses the exact moment when a certain actor should be restrained, or a bit of action pointed up. This is the cinematic "sixth sense" we speak of.

Approach Is Important

We will not here attempt to set down a step-by-step pattern for directing a picture. The truth of the matter is that there is no one *right* way to film a screen story. Even in the highly standardized professional motion picture studios each director follows his own individual formula. One may direct with broad strokes, placing much emphasis on the sweep of spectacle. Another may direct with great sensitivity, using many close-ups to record the most subtle nuances of facial expression. Some directors are blunt and forceful. Others are quiet and patient. Yet each may be very successful, even though each follows a widely different directorial pattern.

The important thing is for the director to establish a definite *approach* and follow it consistently through every phase of production. For instance, once having established the mood of the

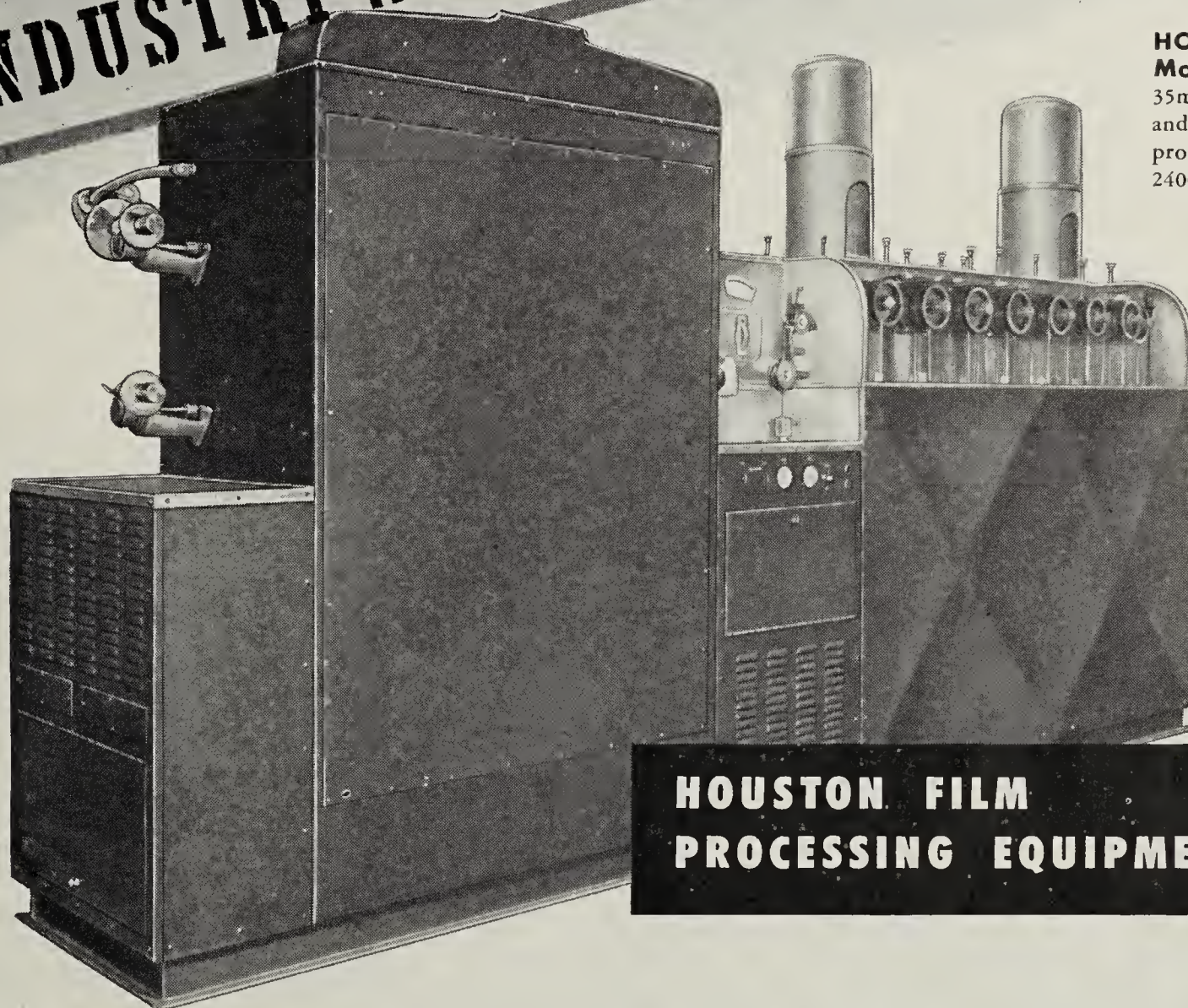
(Continued on Page 380)

The Cinema Workshop

4. Direction

By CHARLES LORING

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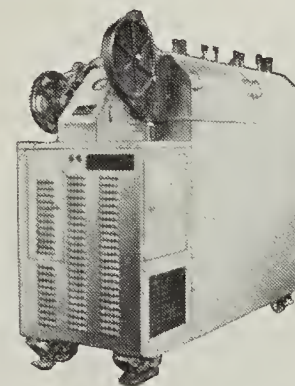
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Society of Motion Picture Engineers Hold Convention in Hollywood, Oct. 21 to 25

SOCIETY of Motion Picture Engineers will hold its 60th semi-annual convention and technical conference at the Hollywood Roosevelt hotel, October 21st to 25th, inclusive, and the event will carry double-barreled significance.

Coupled with the 30th anniversary of the founding of the organization, will be the fact that the convention will be the first held in Hollywood since the end of the war. Papers and demonstrations at the technical sessions will be vitally important to the future techni-

cal and engineering progress of motion pictures, and much new equipment developed during the war for the armed forces and improved for practical use in film practices will be introduced.

From present indications, the convention will be one of the most important and largely-attended in the entire history of the SMPE. Officers of the parent body, and those of the Pacific Coast Section—which will be host to the visitors—are combining to make it an outstanding event in the organization's history.

Organized in 1916

The SMPE was organized in 1916 by a group of engineers who had become connected with the motion picture industry in the days of transition from short reels and haphazard production, to feature length films. Under the leadership of C. Francis Jenkins of Washington, who became first president, the organization was set up with three objects in view: the advancement of motion picture engineering and the allied arts and sciences; the standardization

(Continued on Page 385)



LEADERS OF THE PACIFIC COAST SECTION, S.M.P.E. who are combining to make the 60th semi-annual convention an outstanding success. Back row, left to right: Wesley Miller, Governor; Wallace V. Wolfe; H. W. Remerscheid; Gerald Best; Dr. J. G. Frayne, Governor. Middle row, left to right: Past President Herbert Griffin; Hollis W. Moyse, Chairman, Pacific Coast Section; Loren Ryder, Executive Vice President; Emery Huse, Past President. Front row, Sidney Solow, Secretary-Treasurer, Pacific Coast Section; Dr. C. R. Daily, Governor; and William Mueller, Governor.

S M P E

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October 21st to 25th.



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60th Semi-Annual Convention

SOCIETY OF MOTION

NOTE: The assigned dates of presentation of papers are tentative and subject to change on the final program.

MONDAY, OCTOBER 21

10:00 a.m. *Hollywood-Roosevelt Hotel, Room 201, Mezzanine Floor:* Registration. Advance sale of luncheon and Dinner Dance Tickets.

12:30 p.m. *California Room:* SMPE Get-Together Luncheon, for Members, their guests and friends.

Mr. D. E. Hyndman, President of the Society, will preside.

Guest Speaker: Mr. Byron Price, Vice-President, Motion Picture Association of America, Inc. and Executive Vice-President and Chairman of the Board of Association of Motion Picture Producers, Inc.

2:00 p.m. *Aviation Room, Mezzanine Floor:* Opening Business and Technical Session.

Session will open with a 16-mm motion picture short.

Report of Convention Vice-President, W. C. Kunzmann.

"Motion Pictures on Project Crossroads," Lt. Col. Richard J. Cunningham, A.C., USAAF, Wright Field, Dayton, Ohio.

"National and International Standardization Programs of the ASA," J. W. McNair, ASA Staff.

"The Soundman," George R. Groves, Warner Bros. Pictures, Burbank, Calif.

"Film Conditions in India," Ram L. Gogtay, Bombay, India.

"Recent Developments in the Field of Magnetic Recording," Dr. S. J. Begun, Brush Development Co., Cleveland, O.

"The Motiongraph AA Projector," Emil J. Weinke, Motiongraph Inc., Chicago, Illinois.

8:00 p.m. *Republic Studios, Scoring Stage, North Hollywood:* Evening Technical Session.

Session will open with a 35-mm motion picture short.

"Studio Production with Two Color Bi-Pack Motion Picture Film," J. W. Boyle, ASC, Benjamin Berg, Hal Roach Studios, Culver City, Calif.

"Application of a New One-Strip Color Separation Film in Motion Picture Production," H. C. Harsh & J. S. Friedman, Product Development Laboratory, Ansco, Binghamton, N. Y.

"War-Time Naval Photography of the Electronic Image," Lt. F. X. Clasby, USN and Lt. (j.g.) R. A. Koch, USNR, U. S. Naval Air Station, U. S. Naval Photographic Science Laboratory, Anacostia, D. C.

"A Preliminary Report from the Research Council Subcommittee on Blue Sensitive Photocells," L. T. Goldsmith, Chairman.

"A Combination Scoring, Rerecording & Preview Studio," D. J. Bloomberg & W. O. Watson, Republic Studios, N. Hollywood, Calif., and M. Rettinger, RCA Mfg. Co., Hollywood, Calif.

DIRECTORY OF COMMITTEE CHAIRMEN

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Special Housing Committee.....HERBERT GRIFFIN, *Chairman*
Membership and Subscription Committee (West Coast).....H. W. REMERSHEID, *Chairman*
Ladies Reception Committee
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Projection Program—35-mm.....W. V. WOLFE, *Chairman*, Assisted
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16-mm.....H. W. REMERSHEID

TUESDAY, OCTOBER 22

2:00 p.m. *California Room:* Afternoon Technical Session.

Session will open with a 16-mm motion picture short.

"The Application of the Torsional Magnetostriction Principle to Phonograph Recording & Reproduction," Stanley Rich, Magnetostriction Device Co., Boston, Mass.

"Improved Studio Designs for Stage Doors, Transparency Screens and Water Tank Bulkheads," A. C. Zoulis, Paramount Pictures, Inc., Hollywood, Calif.

"Improved Studio Power Distribution Methods," E. S. Dibble, General Electric Co., Los Angeles, Calif.

"Magnetic Sound for Motion Pictures," Marvin Camras, Armour Research Foundation, Chicago, Ill.

"Preservation & Post War Utilization of U. S. Navy Combat Film," G. L. Sarchet, U. S. Naval Photographic Science Laboratory, U. S. Naval Air Station, Anacostia, D. C.

"A High Quality Recording Power Amplifier," Kurt Singer, Victor Division, RCA, Hollywood, Calif.

"A Magnetic Sound Recorder of Advanced Design," R. J. Tinkham & J. S. Boyers, Magnecord, Inc., Chicago, Ill.

8:00 p.m. *Paramount Studio, 5751 Marathon St.* Evening Technical Session.

Session will open with a 35-mm motion picture short.

"Historical Development of Sound Films," E. I. Sponable, 20th Century Fox Film Corp., New York, N. Y.

"Application of High Speed Flash Lamps," F. E. Carlson, General Electric Co., Nela Park, Cleveland, Ohio.

"Special Cameras and Flash Lamps for High Speed Photography," Dr. R. T. Knapp, Calif. Institute of Technology, Pasadena, Calif.

"Electronic Fire & Gas Light Effect," Harold Nye, Warner Bros. Pictures, Burbank, Calif.

"A Stabilization System for Rate Measurement," Avery Lockyer, Fairchild Camera & Instrument Corp., Jamaica, N. Y.

"Improved Servo, Mechanical & Electrical Devices for Studio Production Use" (Symposium of 5 papers), Engineering Department, Paramount Pictures, Hollywood, Calif.

WEDNESDAY, OCTOBER 23

10:00 a.m. *California Room:* Morning Technical Session.

Session will open with a 16-mm motion picture short.

"Organization & Function of Sectional Committee on Motion Picture Z22," C. R. Keith, Chairman, Z22.

"The Practical Problems of 16-MM Sound," Allen Jacobs, The Calvin Co., Kansas City, Mo.

"Engineering Organization & Standardization Procedures of SMPE," J. A. Maurer, Engineering Vice-President, SMPE.

"A New 16-MM Professional Camera," Friend F. Baker, Mitchell Camera Co., Glendale, Calif.

"The Effect of Feed & Holdback Tensions on Projection Life of 16-MM Film," C. F. Vilbrandt, Eastman Kodak Co., Rochester, N. Y.

"Specifications on Motion Picture Film for Permanent Records," J. A. Bradley, Chairman, Committee on Preservation of Film, Library of Congress, Washington, D. C.

7:15 p.m. *Hollywood-Roosevelt Hotel, Terrace Room:* A social hour for holders of Dinner Dance tickets. (Refreshments).

8:30 p.m. *California Room:* Sixtieth Semi-Annual Convention

President Donald E. Hyndman, presiding.

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THURSDAY, OCTOBER 24

1:00 p.m. *Hollywood-Roosevelt Hotel, Room 201, Mezzanine Floor.* Registration.

2:00 p.m. *California Room:* Afternoon Technical Session.
Session will open with a 16-mm motion picture short.

"A New Blooming Device," George Lewin, Signal Corps Photographic Center, Long Island City, N. Y.

"The Merkur Film Splicer," Irving Merkur, Reeves Instrument Corp., New York, N. Y.

"A Newly Developed Light Modulator for Sound Recording," Glenn L. Dimmick, RCA Mfg. Co., Camden, N. J.

"A DeLuxe Film Recording Machine," M. E. Collins, RCA Mfg. Co., Hollywood, Calif.

"Magnetic Paper Tape Recording," M. E. Collins, RCA Mfg. Co., Hollywood, Calif.

"Coaxial & Separate Two-Way Speaker Systems," H. T. Souther, Stephens Mfg. Co., Los Angeles, Calif.

"Modulation Characteristics of Concentrated-Arc Lamps," by W. D. Buckingham, The Western Union Telegraph Co., Electronica Division, Water Mill, N. Y.

8:00 p.m. *Walt Disney Theater, Disney Studios, Burbank:* Evening Technical Session.

Session will open with a 35-mm motion picture short.

"Legal Aspects of Standardization Relating Specifically to the Motion Picture Industry."

"Film Projectors for Television," R. V. Little, RCA Mfg. Co., Camden, N. J.

"The Showmanship Side of Theatre Television," R. B. Austrian, RKO Television Corp., New York, N. Y.

"The Effect of Time Element in Television Program Operations," H. R. Lubcke, Don Lee Broadcasting System, Hollywood, Calif.

"Television Service for Southern California," Klaus Landberg, Television Productions, Inc., Hollywood, Calif.

FRIDAY, OCTOBER 25

2:00 p.m. *California Room:* Afternoon Technical Session.

Session will open with a 16-mm motion picture short.

"Development of an Invisible 16-MM Film Splice," E. Baumer, Signal Corps Photography Center, Long Island City, N. Y., and J. V. Noble, De Frenes & Co. Studios, Philadelphia, Pa.

"Increased Light for Projection of 16-MM Film with Carbon Arcs," R. J. Zavesky & W. W. Lozier, National Carbon Co., Inc., Fostoria, Ohio.

"Composition in Motion Pictures," H. T. Souther, Stephens Mfg. Co., Los Angeles, Calif.

"The Physical Properties and the Practical Application of the Zoomar Lens," Dr. F. G. Back, Research & Development Laboratory, New York, N. Y.

"A Method for Determining the Shape of the Focal Surface in 16-MM Projection," A. C. Robertson, R. H. Talbot, Jr., Eastman Kodak Co., Rochester, N. Y.

8:00 p.m. *Marquis Theater, Doheny and Melrose:* Evening Technical Session.

Session will open with a 35-mm motion picture short.

"Some Photographic Aspects of Sound Recording," Dr. Otto Sandvik, Eastman Kodak Co., Rochester, N. Y.

"Photographing Things to Come," Col. George W. Goddard, U. S. Army, Air Material Command, Wright Field, Dayton, Ohio.

"A New Projector Program," T. Schaffers, North American Philips Co., Dobbs Ferry, N. Y.

"Recent Developments of Super High Intensity Arc Lamps," F. C. Coates & M. A. Hankins, Mole-Richardson Co., Hollywood, Calif.

"Screen Illumination with Carbon Arc Motion Picture Projection Systems," R. J. Zavesky, C. J. Gertiser & W. W. Lozier, National Carbon Co., Inc., Fostoria, Ohio.

COURTESIES

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ADDITIONAL PAPERS

Presentation Time Not Yet Assigned

1. "Proposals for 16-mm and 8-mm Sprocket Standards," J. S. Chandler, D. F. Lyman & L. R. Martin, Eastman Kodak Co., Rochester, New York.

2. "Radar Scope Photography," R. C. Babish, Vitarama Corp., Huntington Station, N. Y.

3. "Coated Optics," W. R. Strickland, Simpson Optical Mfg. Co., Chicago, Ill.

4. "An Improved Reel Design" (Tentative Title), R. T. VanNiman, Motiograph, Chicago, Ill.

5. "Calculation of Scanning Loss Resulting from Departure from Correct Focus," E. W. Kellogg, RCA Victor Division, RCA Mfg. Co., Camden, N. J.

6. "A New Television Field Pickup Equipment Employing the Image Orthicon," John H. Roe, RCA Victor Division, RCA Mfg. Co., Camden, N. J.

7. "Corrective Networks," F. L. Hopper, Electric Research Products Div., Western Electric, Hollywood, Calif.

8. "A New Series of Camera Lenses for 16-MM Cinematography," W. B. Rayton, Bausch & Lomb Optical Co., Rochester, N. Y.

9. "Film-Lock & Identification Band," Gare Schwartz, 20th Century Fox Film Corp., Beverly Hills, Calif.

10. "An Exposure Meter for Color Photography" (Tentative Title), R. A. Woolsey, Photo Research Corp., San Fernando, Calif.

REGISTRATION

The Convention Registration Headquarters will be located in Room 201 on the mezzanine floor of the Hotel. Members and guests are expected to register. The fee is used to help defray Convention expenses.

Tickets for the Luncheon on Monday and Dinner-Dance on Wednesday must be procured in advance. They will be available at Registration Headquarters. Only holders of Dinner-Dance tickets will be admitted to the Social Hour preceding this event.

LADIES' PROGRAM

A reception parlor for the ladies' daily get-together and open house, with Mrs. H. W. Moyse as hostess, will be announced on the hotel bulletin board and in the final program. The ladies' entertainment program will be announced later.

Ladies are welcome to attend technical sessions of interest, also the Luncheon on October 21, and the Dinner-Dance on October 23. The Convention badge and identification card will be available to the ladies by applying at Registration Headquarters.

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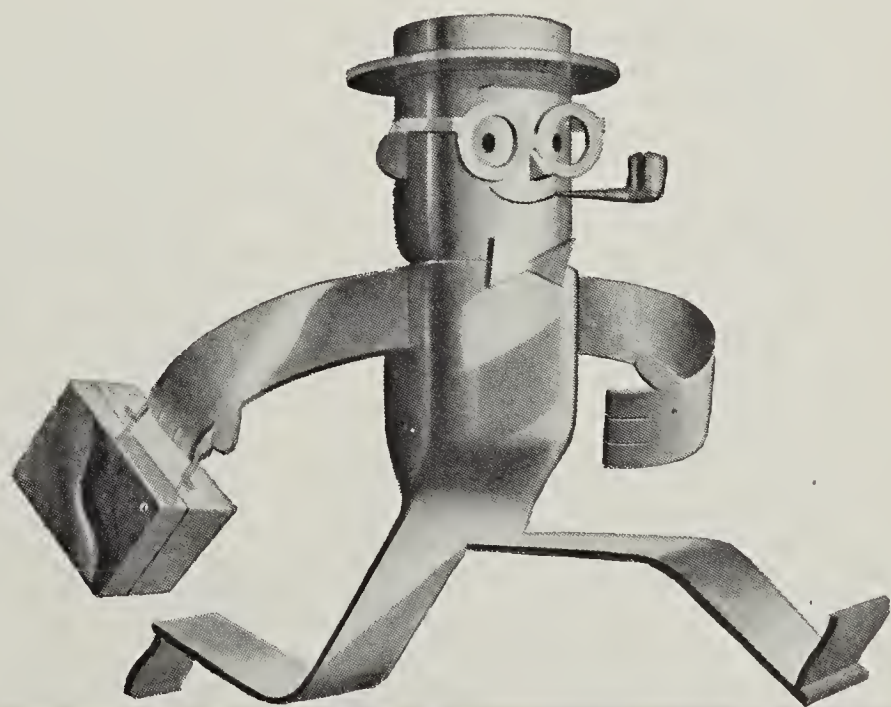
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TITLING IS WHAT YOU MAKE IT

by The Society of Motion Picture Engineers

James R. Oswald

Title cards larger than the normal field of view of a "typewriter" style titler are easily photographed with this auxiliary titler base over which the regular titler rides. Automatic alignment with the center of the easel is assured the full 30 inch length of base, and clever "zoom" effects are possible because of the wood side channels which accurately "track" the camera to and from the easel. Lenses of proper focal length must be used, however, for working at various distances.

PROBABLY there is no phase of home movie making outside of the mastering of exposure technique which has been covered as extensively on the printed page as title making. Article after article, yes, even volume after volume, has been devoted to the importance of titles to a silent movie. Kinds of apparatus available . . . advantages of various sized title cards . . . methods of laying out the text most effectively . . . and proper placement in the film, itself, are but a few of the subjects that have been thoroughly and intelligently treated over and over again. Yet, there are many little tricks often seen in your local theatre that can be easily duplicated on the simplest of title making equipment right at home, but often thought impossible because of lack of written material on subject.

Titling, for the home movie maker, can be sheer drudgery, if considered from the standpoint of being a "necessary evil," or can be as fascinating, or even more so, than picture taking, itself. Indeed, many movie makers, once they have seen the pleasures to be derived from making and projecting a new, and perhaps highly intricate title, of their own creation, would just as soon devote ALL their cinematographic efforts to *title making!*

One doesn't have to be a carpenter or a machinist to construct little gadgets like those pictured along with this article, and he doesn't have to be a skilled technician to perform clever titling tricks that greatly enhance the value of his movies, like those outlined here. Heaven only knows I'm neither of these things! A careful study of the illustrations and their captions will reveal that it would be impracticable to try to give any specific dimensions as to the constructions of the auxiliary apparatus, since this naturally depends upon the basic title making equipment available. From such a study, however, the principle involved in the case of each particular effect will readily be seen, and thus can be easily duplicated.

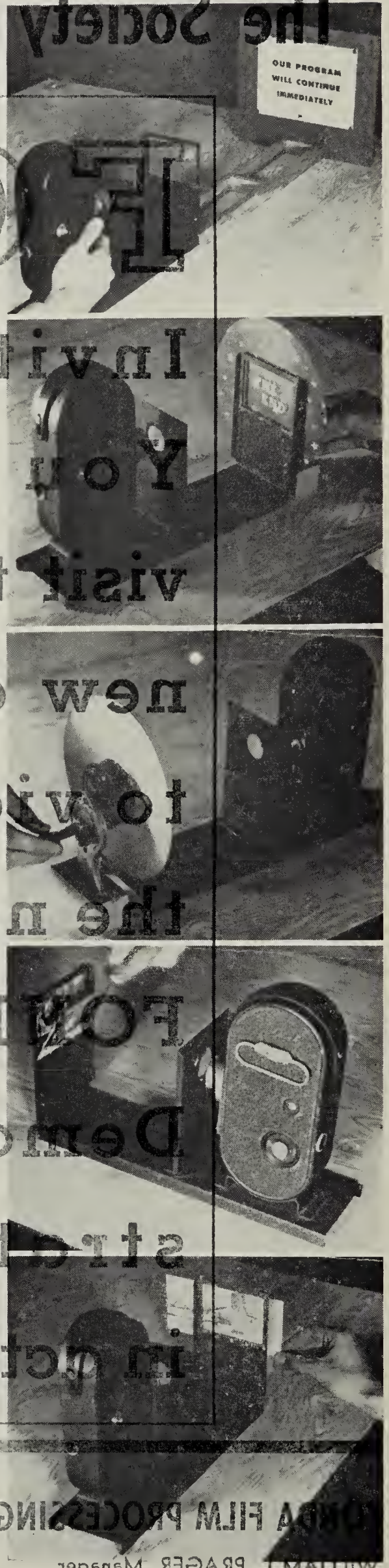
As with all unique effects in movie making, these should be used sparingly, thereby adding to their distinction. In conclusion, remember, **TITLING IS WHAT YOU MAKE IT!**

Novel titles with revolving backgrounds are easily accomplished in a single exposure by pasting gummed letters from the 5 and 10 cent store on a piece of clear celluloid, which is held stationary in the regular title card holder, while the separate background rotates in either direction, and at any desired speed, with the camera filming the entire scene. Your own imagination is the limit to the countless number of materials and designs suitable for use as backgrounds.

A discarded rewind unit propels the disk onto which the background is mounted. Standard 50 or 100-foot cardboard projection reels are used to back the larger disks, thereby providing an instantly interchangeable, "snap-on, snap-off" feature. Thus, any number of backgrounds may be kept available, ready for instant use.

With frame enlargements made from the last frame of one scene and the first one of the next the exact size of your title field, place these two "stills" in front of one another in order of occurrence in the film. With the second scene held firmly in place in the regular title card holder, hinge the first view on one end with a piece of Scotch tape fastened just outside camera range. As the camera is running, let this picture swing on its "hinge" until it finally leaves the title field entirely, revealing the second scene. When the finished film is returned, splice this footage in the proper place in the original reel and you have a perfect, professional "flop-over" transition.

Make a frame enlargement from the last frame of one scene and the first one of the next the exact size of your title field. Mount these two "stills" side by side on a piece of cardboard without any white border separating the two pictures. Frame the first scene in the title card holder, and with the camera running, carefully pull the cardboard over until the picture leaves the field of view and the second scene takes its place. When the finished film is returned, splice this footage in the proper place in the original reel and you have a perfect, professional "side-over" transition.



PHILIP L. VARD, Sales Engineer

WILLIAM L. PRAGER, Manager

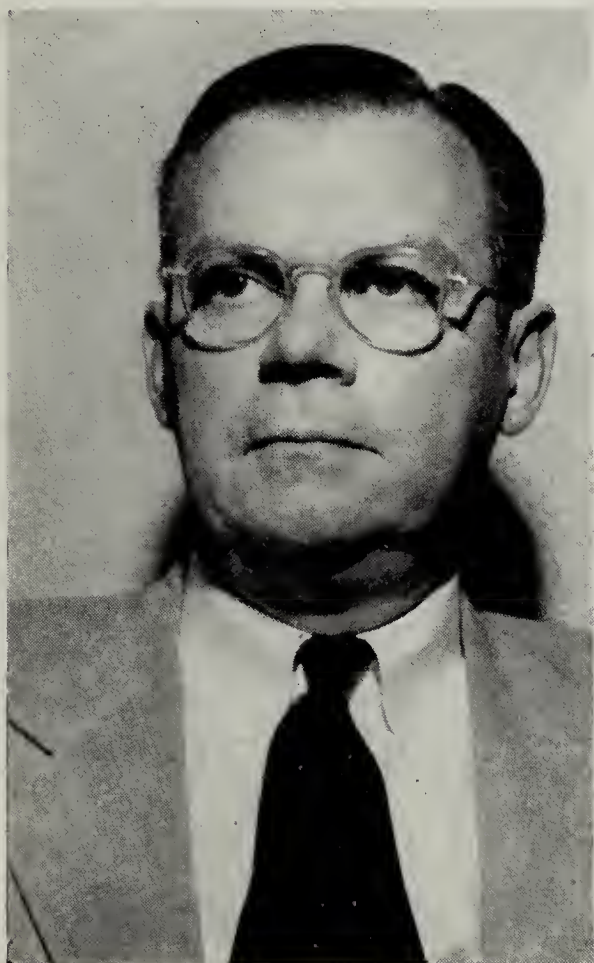
DuPont Distributes Own Film Products On Coast

DuPont Company has purchased the building, equipment, etc., of Smith & Aller, Ltd., which has distributed DuPont motion picture products for the past 20 years to the west coast studios. In acquiring the distributor, DuPont has opened a west coast district sales office which will handle distribution of motion picture film, x-ray film, photographic papers, films, and chemicals.

Myron A. Hatfield, previously Los Angeles branch manager for Defender-DuPont products, has been appointed district manager of the coast Photo Products department. J. Wesley Smith, senior partner in Smith & Aller, will be associated as a consultant. Simeon Aller, well-known in Hollywood film circles for nearly three decades, will

take an extended vacation before embarking on a new enterprise.

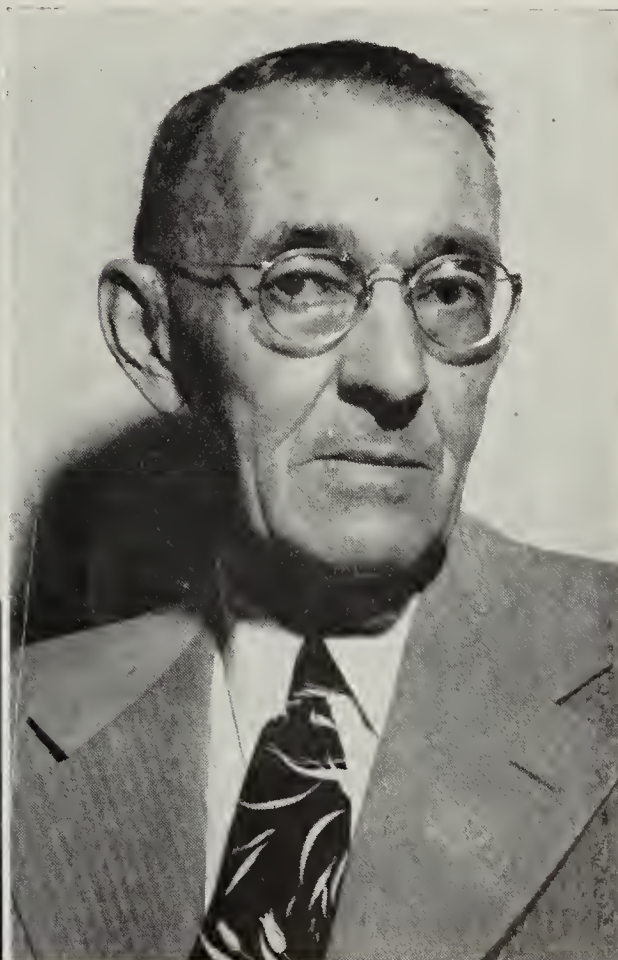
Hollis W. Moyse and Pete L. Shamray will continue with DuPont as technical representatives and contacts with the Hollywood producers—the former also functioning as engineering liaison with the eastern factory. Two added appointments have also been announced in connection with the new DuPont coast organization. H. A. Gladden, transferred from Milwaukee, will be district x-ray sales manager; while A. H. Bertholf functions as district trade sales manager for the Photo Products department at the Los Angeles office of Defender-DuPont.



DUPONT sales and technical representatives in company's new West Coast office.

Upper left: K. T. Molin, Director of Sales, Wilmington; upper right, M. A. Hatfield, District Manager.

Lower panel (left to right): Hollis W. Moyse, Technical Engineer; Pete L. Shamray, Technical Representative, and J. Wesley Smith, Special Consultant.



AMONG THE MOVIE CLUBS

Metropolitan

Metropolitan Motion Picture Club of New York City inaugurated its 1946-47 season with meeting at the Hotel Pennsylvania, with splendid film program comprising: "A GI's Memoirs of France and Switzerland," by Edgar R. Harley; "Jasper Road," by Charles and Robert Coles; "Bettas," by John Larsen; and "New Guinea Newsreel," by Lewis B. Sebring, Jr.

Following the June meeting, which resulted in the election of C. Murray Booth, Alice L. Burnett, Joseph J. Harley and George Mesaros to the board of directors for three year terms; the board re-elected the present officers for another term. They are, president Joseph J. Harley; first vice president Frank E. Gunnell; second vice president John R. Hefe; treasurer Sidney Moritz; and secretary Alice L. Burnett.

It was disclosed that Dr. MacDonald Browne tabbed first prize in the novice contest, entries which were screened at the June meeting, with his "Calling Dr. Kildare." "Camper's Paradise," by Murray Booth was adjudged second best; while "It's V-E Day" by Terry Manos took the third prize in the large field of entries.

Los Angeles Cinema

Close to 300 members and guests attended the September 9th dinner meeting of the Los Angeles Cinema Club, held at the Breakfast Club pavilion. Earl Schenck, scientist, explorer, artist, and author, presented his outstanding kodachrome film, "Polynesia—a Tale of Tahiti;" and then told of his rich and thrilling experience covering 14 years in the Polynesian Islands. Underwater scenes in the picture were outstanding photographic achievements.

San Francisco Westwood

"Practical Use of the Exposure Meter," a talk by Leon M. Kerkhof, featured the August 30th meeting of Westwood Movie Club of San Francisco, held in St. Francis Community Hall. Films included: "Wing Over Alaska," and Al Soderman's "San Francisco Fair."

Brooklyn Amateur

Initial meeting of the new season for the Brooklyn Amateur Cine Club was held on September 18th at 1218 Union Street, with president Charles Benjamin promising a "sensational" year of club activities. Film program for the evening included: "Land Snakes Alive," and "A Tree Grows In Brooklyn," by Leo Heffernan; "Army Air Show," by Jack Glasson; and "Meshes of the Afternoon," by Mya Deren.

Meeting on October 2nd was devoted to discussion and demonstrations of indoor lighting, with club experts on the subjects providing information and angles for the benefit of the members.

La Casa, Alhambra

The progressive La Casa Movie Club of Alhambra, California, presented and all-member film program for meeting of September 16th. Subjects included: "Maytime in the Sierra," by R. Kielsmeier; "Sail-O-Mobiling," by Ralph C. Willhoft; "Desert Wild Flowers," by George H. Kohler; "When Jimmie Comes Marching Home," by John Cook; "A Little Desert, A Little Nebraska," by Dr. D. G. Baird; "The Sierra," by F. A. Carnahan; and "16 mm. Sound in Kodachrome," by R. L. Johns.

Utah Cine Arts Club

Alan Stensvold, one of the top 16 mm. color photographers in the professional field, was guest speaker at the September 11th meeting of Utah Cine Arts Club of Salt Lake City. Stensvold talked on the progress of 16 mm. color cinematography, and the possibilities in the commercial field for the future.

Following the talk and answers-to-questions period by Stensvold, a group of films were shown to climax the meeting.

New York Eight

"The Jungle Parade," by Fred Evans of Van Nuys, California, featured the film program at September 16th meeting of New York Eight MM. Club, held at the hotel Pennsylvania. Usual pre-meeting dinner was held in the Men's Cafe for a good turnout.

Seattle Movie Club

In expanding its activities for the benefit of members, Seattle Movie Club launched two meetings monthly, effective last month. Favorable discussions tending towards fulfillment would provide for film-making as a club activity. Proponents of the idea suggest a pooling of the best cinematographers, together with wealth of equipment which could be assembled, and the aid available among club members for editing and post-production chores.

At the September 10th meeting, members' movies of the club picnic were shown, with member Huntley coming through to accept the first prize. "Show on the Mountain," from ACL library, was run off.

On September 24th, C. Grinnell, A. Widson, and R. Lund functioned as the committee for the Cine Workshop meeting, with the assembled members securing some interesting and valuable knowledge of cinematography and practices to improve their films.

Los Angeles Eight

"God of Creation," photographed by Erwin Moon of the Moody Institute of Science, featured the September 10th meeting of the Los Angeles Eight MM. Club, held in the Bell & Howell auditorium. In addition three club-member films were exhibited: "At Christmas," by Sylvia Fairley; "Coast to Coast," by Herman Hack; and "Reaping the Raindrops," by L. B. Reed.

Annual picnic was held at North Hollywood Park on September 15th, with a large turnout of members, families and guests gathering for an old fashioned basket picnic.

St. Louis Amateur

Contest pictures made by club members at the club picnic on July 28th featured the September 10th meeting of Amateur Motion Picture Club of St. Louis. Martin Manovill's entry was adjudged best.

Other films on the program included: "A Tramp in the Woods," by Ryne Zimmerman of Milwaukee; "Overland Club Picnic of 1946;" "Easter Sunday With the Easterdays;" and "Follow the Girls," by Oscar H. Horovitz.

Milwaukee Amateur

Amateur Movie Society of Milwaukee has set dates for the club's annual film exhibitions. Entries for the 8mm. division will be shown on November 13th, while those of the 16mm. classification will be exhibited on November 27th.

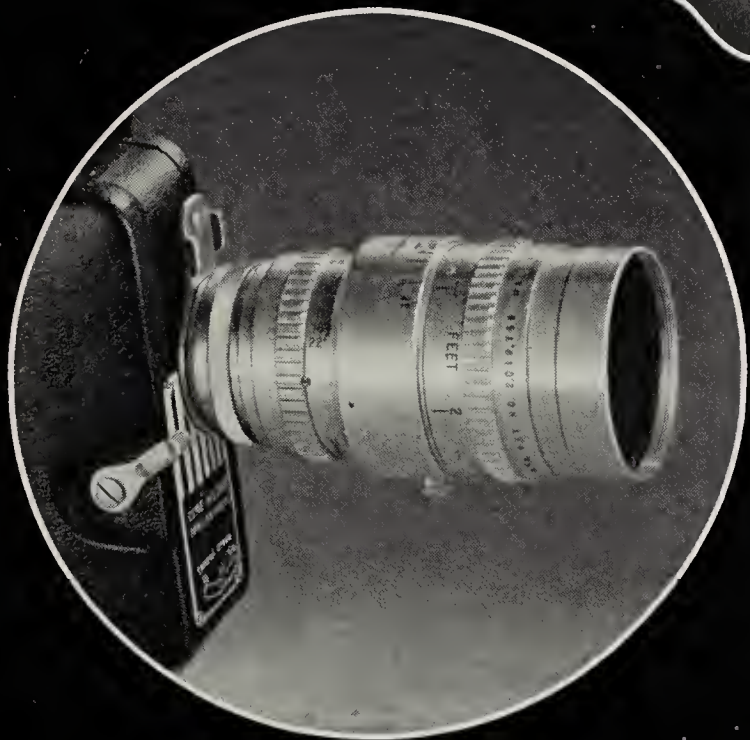
Members' vacation films highlighted the meeting of September 11th, while program for the September 25th was still a dark secret as we went to press.



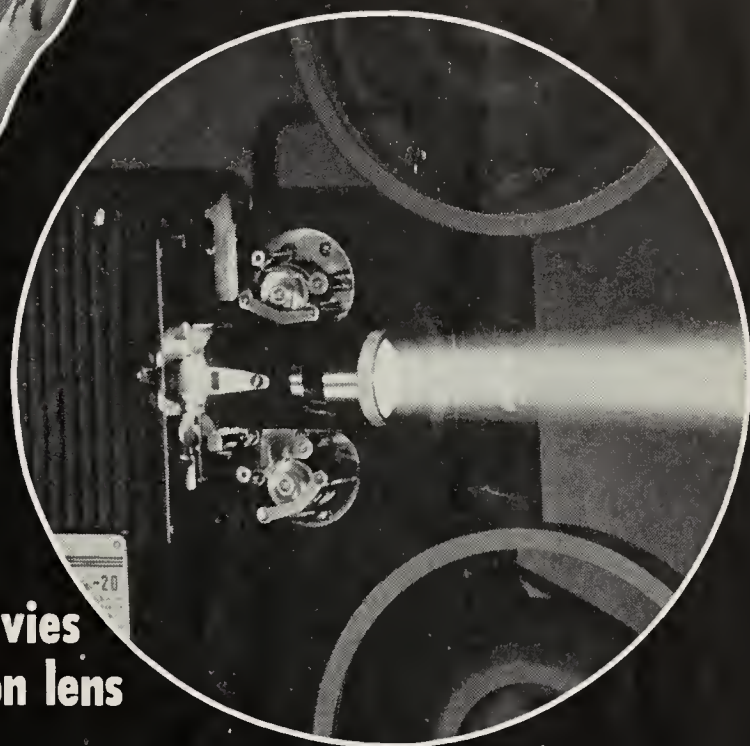
MEMBERS OF BROOKLYN AMATEUR CINE CLUB on annual outing at Fox Museum, Seaforth, L. I., July 14, 1946.—Photo by President Charles Benjamin.

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An Ace Heads East

(Continued from Page 355)

era *artiste* threw his focusing cloth to the ground, jumped up and down on it, and screamed at Jimmy: "Why don't you go in and worry about your *noodles* and let *me* take the pictures?"

Jimmy's sincere craftsmanship is evident in the way he works on the set. He seems to be all over the sound stage at once: checking the light balance, coordinating action with camera movement, peering through the view-finder to make sure every element of composition is just right. A happy blending of the artist and the realist, he works for compositions that are forceful without being stagy, and he always keeps his set-ups flexible enough to allow the player to move about naturally within the frame.

Yett, with all his precise attention to photographic detail, with all his intense devotion to the camera, he does not consider any one phase of production more important than the others. "A good motion picture is the result of *team-work*," he explains. "If the director, the cameraman, the writer, producer, and art director each work as separate individuals without regard for the overall approach of the picture, the final result cannot be consistent or forceful on the screen. But if they work closely together, with each technician blending his own specialty to complement the other phases of production, a finer pic-

ture is sure to result. This is the principle on which we hope to build the new motion picture industry in China; *team-work* and *cooperation*."

New Film Frontier in China

Now, at the zenith of his success as a director of cinematography, James Wong Howe expects to be leaving Hollywood to help bring the motion picture to a vast undeveloped land where life still, for the most part, follows the same primitive pattern that it did a thousand years ago. For one who has spent so many years in the film capital, it will not be easy to leave, but he feels that he must go now when he can really be of assistance to an important project.

"Hollywood has been very good to me," he reflects, "and I'm grateful for all I have been able to learn, for the chance to work in so inspiring an industry, and for the friends I've made while doing so. I've spent the last thirty years shooting movies in Hollywood. In the early days it was difficult; we had inadequate equipment, we had to improvise, we were pioneering a new industry—but there was a real thrill to it. Today, China is a new frontier for the motion picture. We'll be pioneering again, but I know that this time, too, it will be a real adventure."

When he speaks of China and the film work he will do there, he fairly bubbles with enthusiasm. The possibilities are so vast that it will take many years to accomplish all of them, but he looks

at the project from a long-range point of view in terms of what it will ultimately mean to the Chinese people.

Vast Opportunities Open

"Picture a huge nation of 450 million people," he says, "most of whom have never seen a motion picture. Their ways of life have stayed the same for centuries; they are out of contact with the rest of the world, and hardly know what is going on right in their own country. By means of the motion picture we can bring the world to them—and in the same way, we can bring their story to the world. The film is the perfect medium for unifying and educating the people of China."

Documentary Films First

To achieve this enlightenment of the Chinese people, Howe visualizes a comprehensive program to bring current events and national problems to the screen. This will be done, not with conventional newsreels, but by means of carefully formulated, unbiased documentary features—very much like our "March of Time"—which will analyze problems of national importance and encourage the people to work them out in a democratic way.

Jimmy points out that the immediate projects (groundwork of which has already been laid) will include the commercial lab and the visual education program. When these have been well-organized, he plans to start production of regular feature-length photoplays for general entertainment. He feels that the country itself holds much that can be placed on the screen to good advantage.

"The literature of China is rich and colorful," he points out, "but more than that, it is *cinematic*. There are many fine stories just waiting to be put on film—stories of the folk who live on river boats and spend their lives drifting down the waterways of China, stories of the farmers living close to the land and drawing life from the soil. We will film stories like these, not on sound stages with artificial sets and props, but in actual locales where we can capture realism and the flavor of the country itself."

To Stress Technical Quality

With the new lab acting as an advisory board and research center, it is expected that the technical quality of these films will ultimately approach that of Hollywood productions. But the flavor of the screen presentation will remain authentically Chinese. Jimmy Howe expects to extend his activities to the fields of production and direction, perhaps eventually calling in Hollywood stars and technicians to make individual pictures. In this way he feels that understanding between the two nations can be pleasantly and effectively increased.

Asked what his ultimate ambition is, Jimmy replies with frank sincerity: "I just want to go on making movies as long as I am able. Technical progress in motion pictures has only just begun. There are still great strides to be made and I want to do my part toward the new

(Continued on Page 385)

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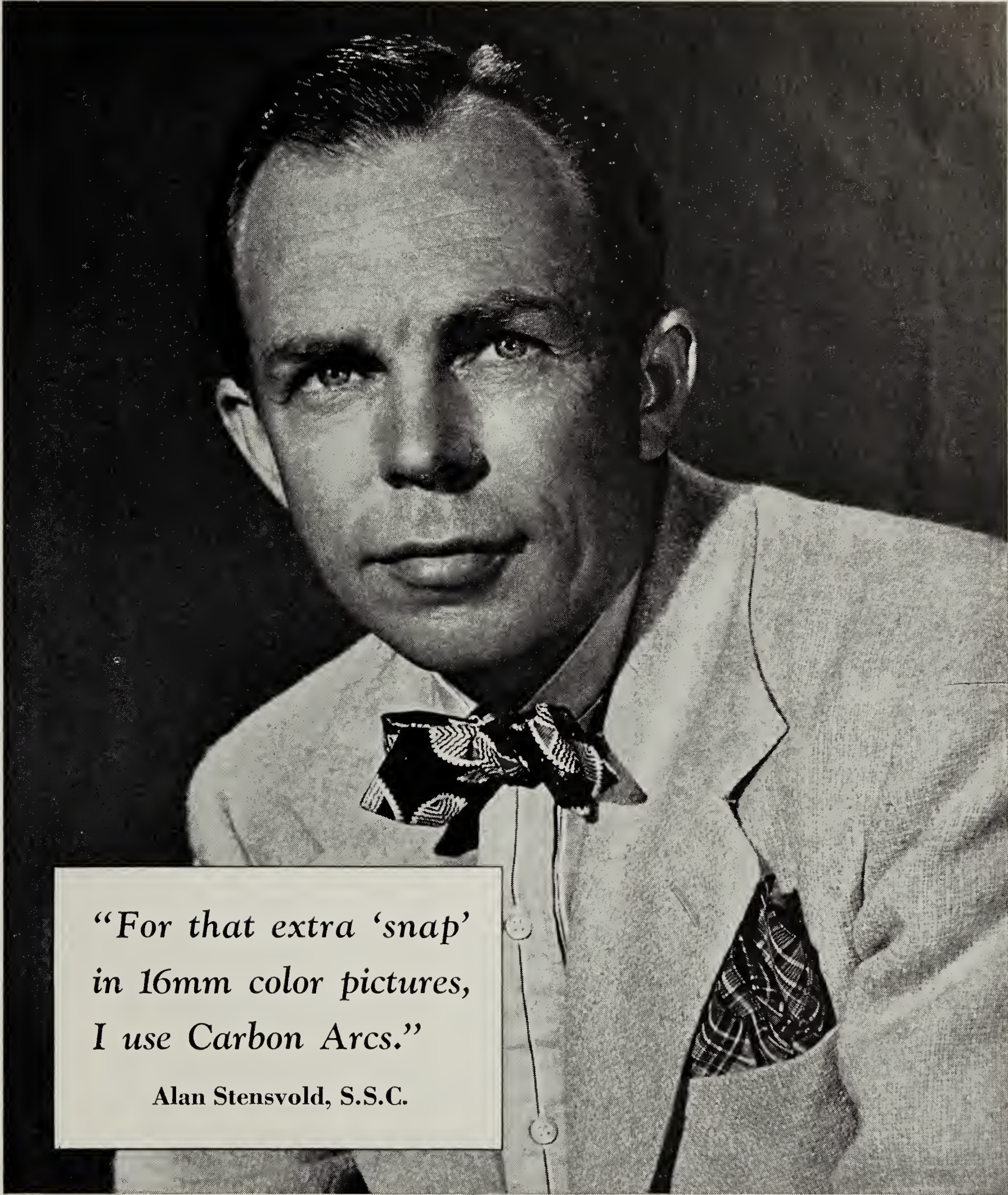
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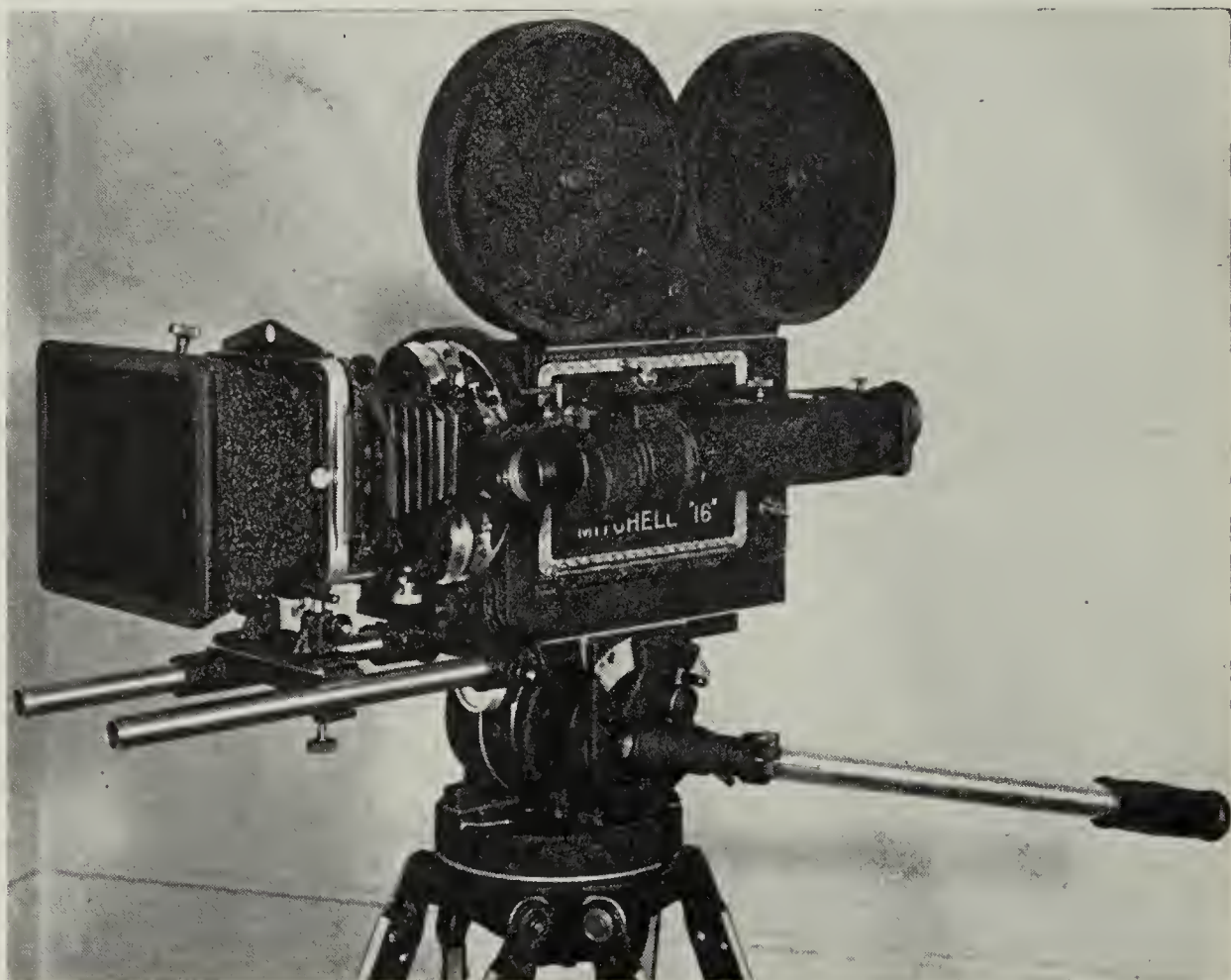
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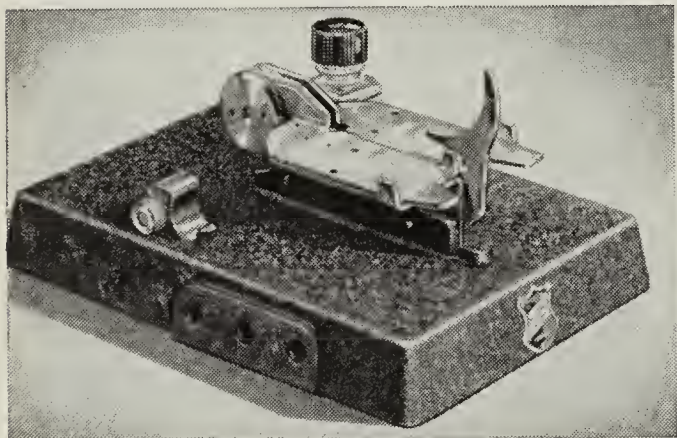
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There is little difference in design or operation between the Mitchell 16mm. and 35mm. cameras. The smaller camera incorporates the same "rack-over" device, the same type of focusing telescope and view finder. A quick-shifting, four-lens turret, a hand dissolve with miniature shutter and a combination matte box and sunshade unit are a few of the other Mitchell features included in the "16."

The movement is a double cam type: one cam actuates the pull-down mechanism, and the second cam operates the pilot pins.

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Aces of the Camera

(Continued from Page 351)

was set up in the middle of the platform, keeping the dogs in his sights, when suddenly they broke away from their attendants and came bounding along at a speed and in a manner uncalled for in the script. The six dogs, chained together in two sets of three, and probably trying to impress the director, swept the tripod from under the camera and dragged that important instrument for several blocks before they could be brought to heel. Then the company rested and the producer languished while repairs were made on the camera.

The next picture for the same company was called "Barbarous Mexico," an opportunistic venture filmed against the background of the Mexican revolution of 1912. To shoot the battle scenes Irving was shipped down to Mexico. He arrived in El Paso, and after some finagling made contact with the supporters of one of the contending generals who agreed to get him across the Rio Grande the following night.

The spot chosen for the crossing was a place on the river near Fort Hancock, Texas; safely in back of the lines which were running roughly north and south at that time. And Irving, with his fellow adventurer, were to cross in company with twenty or thirty other men who had been enlisted to serve with this particular general.

When, after a rough ride in some requisitioned buckboards, the group of men arrived at the appointed place by the river it was decided that there were not enough boats for everyone to make the trip at the same time. It was decided, therefore, to send most of the fighting men on ahead and send back one of the boats for Irving and his companion.

Those remaining on the American side settled down in the inky blackness to wait. They heard the sound of the muffled oars diminish in the distance. Then silence. And then a volley of shots rang out, then another, and another. The watchers saw the flash of rifle fire on the opposite bank. The boat did not return.

His second attempt to get into the fray was more successful, landing him, via train from El Paso, in Torreone. And he arrived just in time to film a major engagement. There were charges and counter-charges, and the cavalry shots were magnificent with the horses rearing and creating enough dust to make everything wonderfully photogenic. But Irving had chosen the wrong side.

He had about settled down to shoot this war in comfort when he had to retreat. And then they retreated again after another short stand. And then again. Finally it was decided to make a stand at a cleft in the mountains, a seemingly impregnable position, called Bachimba Pass.

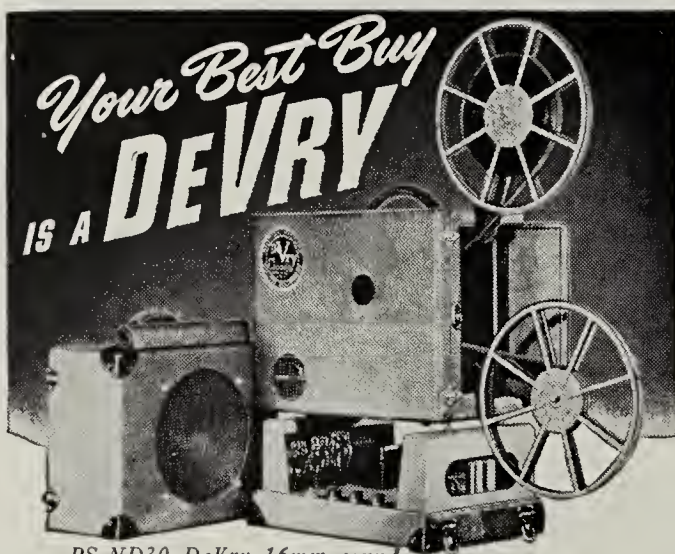
The general took Irving into his confidence and showed him the plan of his strategy; where he would deploy his troops, where his cavalry would lie in wait for the orders to charge, where the three-inch guns would be mounted. And he told Irving to pick the spot he wanted to shoot from.

Irving picked a place on the summit of one of the two cliffs that formed the pass through the mountains. From such a vantage point he could sweep the entire battle arena. And besides, it was safe.

He had chosen well. It turned out to be a spectacular fight and everything passed before his lens as he had hoped. And it had been perfectly safe. It had been.

Suddenly the bullets from a machine-gun started peppering his position. They came so thick and fast, and with such deadly accuracy that it would have been

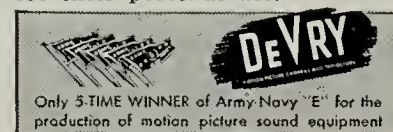
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ORIGINATORS & IMPROVERS OF PORTABLE MOTION PICTURE EQUIPMENT... SINCE 1913

fatal for the two men to expose themselves in an effort to rescue the camera that was sticking out of the foxhole in which they were now trying to make themselves as inconspicuous as possible. But they had to save the camera.

Digging like mad they dug a trench from their hole across the fortunately narrow brow of the hill until they were out of the line of fire. And just in time. The position was not impregnable, and the retreat was on again.

Chagrined at having given permission to these Yankee cameramen to film what had turned out to be his military failures, the general refused to give them permission to leave the country and clapped them in jail. They got out of this by bribing the captain of the guard with a new pair of trousers that he sorely needed, and after several more similar episodes shook the dust of Mexico from their feet and out of their sombreros.

But there is an interesting aftermath to this story that is worth telling.

One day, several years later, Irving was crossing San Francisco Bay on a ferryboat in pursuit of some newsworthy footage for The Selig-Tribune Newsreel Weekly, the camera department of which he had organized. On the ferryboat he fell into conversation with a cowhand, a Texan who told Irving that he had spent some time in Mexico. Well, that gave the two men something in common, and so Irving told him that he had filmed the battle of Bachimba Pass. And as the conversation developed it turned out that this cowhand had also been in that battle on the opposing side. Finally, Irving got to the part of the story about the merciless rain of bullets that drove him and his camera from his perch on top of the cliff.

"Well I'm damned!" said the cowhand. "Well, I'm damned!"

"What's the matter?" Irving wanted to know.

"Well," said the Texan, "I was the guy who was shooting at you. But I had no idea that was a camera up there, I thought you had a machine-gun."

Back in Chicago, Irving transferred his affections to the Rothacker Film Co. for whom he made industrial and topical subjects for a couple of years. On this job he traveled the country, lugging his own camera and baggage and frequently spent weeks at a time sleeping on trains. But he quit when an overzealous efficiency man made uncomplimentary noises one morning when he came in 15 minutes late.

That, of course, called for a drink. And over the drink in the La Salle Hotel bar he met a newspaper friend of his attached to the NEA news service who was just leaving to cover the new war in Europe. He told Irving that he knew of a group of men who had put up money for a film to be made in Europe behind the German lines. They were all set except for a cameraman, and he asked Irving if he would like to go along.

He did. And the outgrowth of that

conversation was as fantastic an expedition as was ever attempted and made during a war. The two men equipped a Stutz "Bearcat" to carry all their bags and photographic paraphernalia, drove it to New York, from where it was shipped to Rotterdam, and from where they drove to Berlin. From Berlin they followed the German armies in their early victories on the Russian front, filmed the capture of Warsaw, and after returning to Berlin, toured the fighting zones on the Western front.

Irving returned to America with some of the most interesting footage of the first war to be fought on a modern scale. But except for a few showings around Chicago the picture went unreleased because the backers, inspired no doubt by the martial spirit of the film, fought among themselves.

That was when he organized the camera department for the Selig-Tribune News in Chicago. One of his first assignments on that job took him right back to Mexico to cover General Pershing's expedition to Agua Prieto.

He felt the Hollywood urge in 1917 and became cameraman for L.K.O. Comedies, a company whose greatest asset probably was in the services of Norman Taurog as director; then he worked for Vitagraph to film the Jimmy Aubrey comedy series; and in '21 for "Bronco Billy" Anderson to do the Stan Laurel pictures. In 1922 he worked for Hunt Stromberg making a series that starred Bull Montana, and the next year Bill Thorpe for a series of Westerns.

When M-G-M- called him in 1924 it was for a three week assignment, and his job was to do the trick work in a comedy sequence in which the script called for Louise Fazenda to ride an ostrich.

This was probably the first occasion on which a cameraman had ever been called in to specifically create a "special effect." The results were so good, and with such a saving of time and money to the production, that Irving realized

that the creation of a department where all tricks shots could be handled would be most beneficial to the studio. He sold the idea to the Metro officials and his three weeks has so far stretched to 22 years.

It was in this department that the first dissolves were made on to lavenders, and later, working with technicians from Eastman, that the first duping stock was developed.

Every year Irving has added to his already extensive repertoire. Soon to be released is "The Cockeyed Miracle," a picture that has once more given the old master full range for his mystifying bag of tricks. If you're interested in trick work, this has everything. Go to see it!

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Cinema Workshop

(Continued from Page 360)

story, he will see to it that every bit of treatment follows in key with that mood. Selecting the various elements of a given situation, he blends them together to form a definite and tangible atmosphere. If, for example, the locale were a waterfront dive, he would cut in flashes of a couple of drunks arguing at a table, a bartender spinning drinks down the bar, a piano-player pounding out raucous rhythm between gulps of beer, a waterfront floozie flirting with a sailor, a moocher trying to beg drinks from the bartender, etc. All of these *segments* of the situation would set the mood much more effectively than a single overall shot of the room.

It is, after all, the little touches of originality that form a director's *style* and add punch to the film narrative. To the observant director, no action—no matter how small—is insignificant. Each offers a challenge, a chance to present in an original way a bit of business that had always before been presented in the same trite way. These touches help also to enhance characterization, so that the characters become individuals instead of mere general types.

Even the most detailed script cannot anticipate all the added touches that are apt to present themselves when the story actually starts to unfold on the

shooting stage. Perhaps an actor will add a bit of humorous business or a line of smart dialogue; maybe the cameraman will discover a forceful angle that hadn't been bargained for. The director should always stand ready to take full advantage of these spur-of-the-moment developments, as they will give added life to his film—provided, of course, that they do not go off on tangents. A script that has a basis of strong plot action will especially benefit by the inclusion of these little touches.

The director will find that *approach* depends upon getting his trend of action and mood firmly in mind, and keeping every element of treatment in that key during filming.

Working with Your Cast

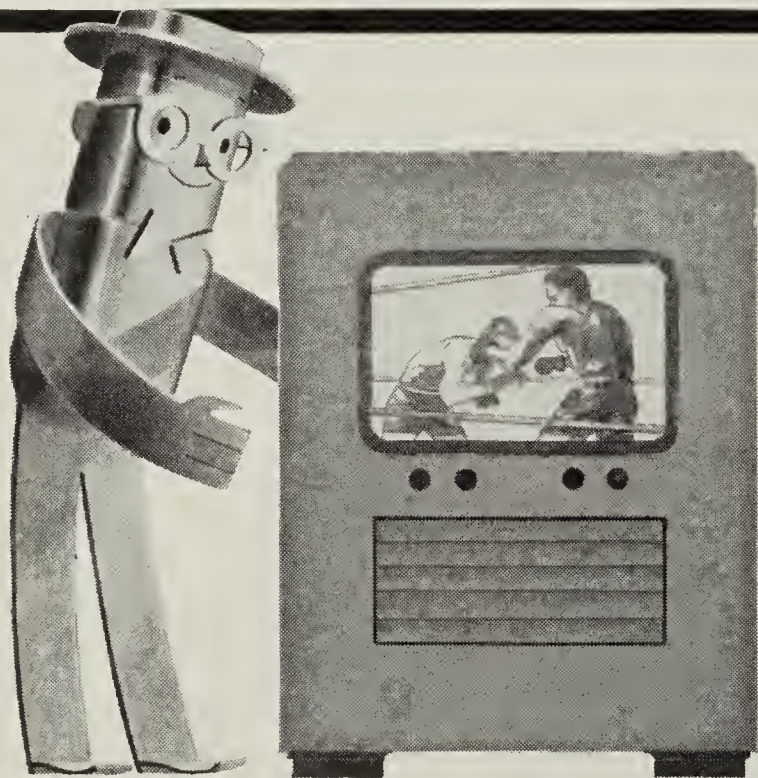
We have said that it is a major responsibility of the director to bring out the professional best in the people with whom he is working. This applies not only to his fellow technicians, but also to his players, the actors portraying the various characters in the film. We use the term "actors" in a general sense to include anyone appearing before the camera in a directed film, whether it be commercial, educational, or documentary.

The most effective tool a director can use in working with a cast is his own personality. In terms of simple psychology, if he acts in a certain way toward them, his players will re-act in a corresponding way. He must be understand-

ing, patient, sensitive, and determined to settle for nothing less than a creditable result. Above all, in working with players, he should develop the ability to convey his ideas to them clearly and productively.

Too many beginning directors worry about what kind of impression they are creating in front of their cast. They are afraid that they may seem unprofessional if they allow themselves to really enter into the spirit of the thing. Actually this is a fallacy, for it matters not one little bit what impression the director creates during filming as long as he gets the desired results on the screen, for it is in terms of the film itself that he will ultimately be judged. He should, therefore, get rid of all traces of self-consciousness and learn to act naturally. He should also develop his own dramatic sense and acting ability, so that if he finds it necessary to suggest a bit of action to the cast by actually going through the motions, he can do so effectively.

From the standpoint of personal temperament, it behooves the director to know how to control *himself* before he attempts to control others. Contrary to popular belief, a movie set is no place for "temperament," especially on the part of the director. Violent displays of emotion work against the film instead of for it, and indicate that the director is unable to cope with the admittedly intense strains of directing a motion pic-



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Photography at Bikini

(Continued from Page 352)

the field at Kwajalein, where speed in processing under tropical conditions was essential. Major P. M. Thomas from Wright Field was placed in charge of camera engineering and the ultra-high-speed cameras—Fastex, Eastman UHS, and the Jeromes running 1,000 frames per second.

At Lowry Field, Colonel Cullen contacted the remnants of the AAF First Motion Picture Unit, but demobilization had set in to the point where no professional motion picture photographers were available. From Wright Field Photographic division, technical intelligence, Lt. Col. Richard "Joe" Cunningham, formerly with RKO, was placed in charge of motion picture. In addition to his crew from Wright Field, he had to have top production photographers to photograph the bomb blast and to direct and film the historic and documentary coverage required.

The writer, starting on terminal leave received orders returning him to active duty for Operations Crossroads. With other members of the A. S. C., and ex-service photographers from the picture industry in Hollywood, Lt. Col. Cunningham was able to fill his requirements.

At Roswell, the intensive training started—many of us were veterans in the air, but some were not. Some of us had many hours in B 29's at very high altitudes, while others made their first high altitude flights during this training period. But when it came time to head overseas, long hours of flight, high altitudes and oxygen were no novelty for any member of the group. Colonel Cullen had whipped up a smooth-working photo organization.

But in the Pacific, the conditions were entirely different. From desert flying over New Mexico, in dry—and many times dusty — air, we went into the humid tropical zone of Kwajalein, and to different problems. We flew somewhat higher in the Pacific, and continued the training program until every man knew exactly what he was to do under various conditions or emergencies, and could do it. What to expect—that was something else again. None had ever before planned to photograph the detonation of an atom bomb in the air.

General Ramey had planned well. Ground crews, air crews, photographers—all were briefed on every mission, just the same as a combat outfit—except that none was shooting at you. Yes, and the dried eggs, spam, dehydrated vegetables and canned sausage were just as evident as the lack of fresh milk, fruit, and salads.

Colonel Cullen was relentless in his insistence on dry runs (repeated plane trips over the route mapped for each plane when the atom bomb was to be exploded)—"Nothing short of perfection in the Air Foto Unit"—and it paid off. He had selected, secured and or-

ganized the largest photo unit that was ever put together to photograph a momentous event in history—and accomplished it in a very short time. In combination with staff planning, it is to his lasting credit that we were able to deliver a most complete and informative photographic record of the atomic blast—without a single casualty.

Although, at first glance, the cost of the atom tests may seem excessive, the records secured by Air Foto Unit have alone justified the huge expenditure. For, from the many hundreds of thousands of feet of film, Manhattan scientists and atomic engineers will secure vital information of actual atom blast characteristics for future research; and such data could not have been obtained in any other manner.

For example, the importance of motion picture records for the scientists is best demonstrated in excerpt from a recent article in Air Force magazine, which stated: "Actually, it is not too much of an exaggeration for never before, even during war-long operations calling for split-second timing, as the AAF had to meet the challenge of micro-second synchronization demanded at Crossroads. From the Manhattan district to the Air Forces came this request: 'Get us on film,' said the scientists, 'the first one-tenth of a second after bomb-burst. And if possible, get it so that it can be broken down for analysis to less than one ten-thousandth

of a second.' For good measure, the AAF has gone the Manhattan District one better; the delivered film was so marked that it can be measured in terms of 500-millionths of a second."



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Current Assignments of A. S. C. Members

As this issue of AMERICAN CINEMATOGRAPHER goes to press, members of the A. S. C. are engaged as Directors of Photography on the following productions in the Hollywood studios:

Columbia

Joseph Walker, "The Guilt of Janet Ames," with Rosalind Russell, Melvyn Douglas, Sid Caesar, Nina Foch.

Ray Fernstrom, "The Last of the Redmen," with Jon Hall, Michael O'Shea, Evelyn Ankers, Julie Bishop.

Charles Lawton, Jr., "They Walk Alone," with Glenn Ford, Janis Carter, Barry Sullivan, Edgar Buchanan.

Fred Jackman, Jr., "Twin Sombros," (Cinecolor), with Randolph Scott, Barbara Britton.

Vincent Farrar, "Cigarette Girl," with Leslie Brooks, Jimmy Lloyd.

George Meehan, "Inside Story," with Chester Morris, Constance Dowling.

Enterprise

Russell Metty, "Arch of Triumph," with Ingrid Bergman, Charles Boyer, Ruth Warrick, Louis Calhern, Michael Chekhov, J. Edward Bromberg.

Metro-Goldwyn-Mayer

Charles Schoenbaum, "Summer Holiday," (Technicolor), with Mickey Rooney, Gloria DeHaven, Walter Huston, Frank Morgan.

Robert Surtees, "Unfinished Dance," (Technicolor), with Margaret O'Brien, Cyd Charisse, Danny Thomas.

Karl Freund, "This Time For Keeps," with Esther Williams, Johnnie Johnston,

Jimmy Durante, Lauritz Melchior, Xavier Cugat.

Hal Rosson, "To Kiss and to Keep," with Gene Kelly, Marie McDonald, Charles Winninger, Spring Byington.

Robert Planck, "It Happened in Brooklyn," with Frank Sinatra, Kathryn Grayson, Peter Lawford, Jimmy Durante.

Paul Vogel, "Merton of the Movies," with Red Skelton, Virginia O'Brien, Alan Mowbray.

Sidney Wagner, "The Yankee," with Van Johnson, Thomas Mitchell, Dean Stockwell.

George Folsey, "Green Dolphin Street," with Lana Turner, Van Heflin, Richard Hart, Donna Reed, Edmund Gwenn, Reginald Owen.

Monogram

Henry Sharp, "It Happened on Fifth Avenue," with Ann Harding, Victor Moore.

Harry Neumann, "Cisco and the Angel," with Gilbert Roland, Frank Yaconelli.

Paramount

George Barnes, "Emperor Waltz," (Technicolor), with Bing Crosby, Joan Fontaine, Roland Culver, Lucile Watson, Sig Ruman.

Ray Rennahan, "Unconquered," (Technicolor), with Gary Cooper, Paulette Goddard, Howard DaSilva, Cecil Kellaway, Ward Bond, Katherine DeMille, Boris Karloff.

Daniel Fapp, "Golden Earrings," with Ray Milland, Marlene Dietrich, Murvyn Vye, Bruce Lester, Reinhold Schunzel, Quentin Reynolds, Ivan Triesault.

Charles Lang, "Desert Town," (Technicolor) (Hal Wallis Prod.) with John Hodiak, Elizabeth Scott, Burt Lancaster, Mary Astor.

Ernest Lazslo, "Dear Ruth," with Joan Caulfield, William Holden, Edward Arnold.

John Seitz, "The Big Haircut," with Alan Ladd, Robert Preston, Dorothy Lamour, Lloyd Nolan.

Jack Greenhalgh, "Adventure Island," (Cinecolor) (Pine-Thomas Prod.) with Rory Calhoun, Rhonda Fleming, Paul Kelly, John Abbott, Alan Napier.

PRC

Walter Streng, "Lighthouse," with June Lang, Don Castle, John Litel.

RKO

Nick Musuraca, "The Bachelor and the Bobby-Soxer," with Cary Grant, Myrna Loy, Shirley Temple, Rudy Vallee.

Harry Wild, "They Won't Believe Me," with Robert Young, Susan Hayward,

Sol Polito, "A Time to Kill," (Hakim-Litvak Prod.) with Henry Fonda, Barbara Bel Geddes, Vincent Price, Ann Dvorak.

Republic

John Alton, "Hit Parade," with Edie Albert, Constance Moore.

Screen Guild Productions

Robert Pittack, "Queen of the Ama-

zons," with Patricia Morison, Robert Lowery, J. Edward Bromberg.

James Brown, Jr., "Renegade Girl," with Alan Curtis, Ann Savage, Jack Holt, Russell Wade.

20th Century-Fox

Arthur Arling, "Home Stretch," (Technicolor), with Cornel Wilde, Maureen O'Hara, Glenn Langan, Helen Walker.

Charles Clarke, "Bob, Son of Battle," (Technicolor), with Peggy Ann Garner, Lon McCallister, Edmund Gwenn.

Benjamin Kline, "Backlash," (Sol Wurtzel Prod.) with Richard Travis, Jean Rogers, Larry Blake.

Norbert Brodine, "Boomerang," with Dana Andrews, Frank Latimore, Jane Wyatt, Lee J. Cobb.

United Artists

William Mellor, "Carnegie Hall," (Federal Films) with Marsha Hunt, William Prince, Martha O'Driscoll, Frank McHugh, Felix Bressart, Hans Jaray and Leopold Stowkowski, Jascha Heifetz, Bruno Walter, Artur Rodzinski, Lily Pons, Rise Stevens.

Franz Planer, "Vendetta," (California Pictures), with DeGeorge, Faith Domergue, Hillary Brooke, Nigel Bruce, J. Carroll Naish.

Lucien Androit, "New Orleans," (Majestic Prods.) with Arturo de Cordova, Dorothy Patrick, Marjorie Lord, Richard Hageman, Irene Rich, Louis Armstrong.

Russell Harlan, "Red River," (Monterey Prods.) with John Wayne, Montgomery Clift, Walter Brennan, John Ireland, Margaret O'Sheridan.

John Boyle, "Who Killed Doc Robin," (Cinecolor) (Hal Roach) with Larry Olsen, Eilene Janssen.

Universal-International

George Robinson, W. Howard Greene, "Flare of Tripoli," (Technicolor) with Yvonne DeCarlo, George Brent, Brod Crawford, Andy Devine, Lois Collier, Arthur Treacher, Albert Dekker.

Hal Mohr, "I'll Be Yours," with Deanna Durbin, Tom Drake, William Bendix, Adolphe Menjou.

Warners

Joe Valentine, "Possessed," with Joan Crawford, Van Heflin, Raymond Massey, Geraldine Brooks.

James Wong Howe, "Pursued," (United States Pictures) with Teresa Wright, Robert Mitchum, Judith Anderson, Alan Hale.

Wesley Anderson, "Love and Learn," with Jack Carson, Robert Hutton, Martha Vickers, Janis Paige.

Peverell Marley, "Night Unto Night," with Viveca Lindfors, Ronald Regan, Bruce Bennett, Rosemary De Camp.

Victor Milner, A.S.C., Takes Bride

Victor Milner, A.S.C. past president of the organization and one of the foremost Directors of Photography over a long period of years, was married on July 21st to Edith Glidden. Disclosure was made following the return of the Milners from a honeymoon trip through Mexico and Guatemala.



SMPE Convention Plans

(Continued from Page 362)

of the mechanisms and practices employed in the motion picture industry; and the dissemination of scientific knowledge by publication.

Semi-annual conventions were set up immediately, where technical papers were presented and discussions invited. In studying proposals for new standards and procedures for motion picture engineering, the officers and committees of the SMPE always consult with representatives of every branch of the motion picture industry to assure that their recommendations represent majority opinion, with maximum benefits to all concerned. By this procedure, the Society has coordinated on a national basis the engineering thinking of an entire industry, and has led the motion picture industry to accept technical improvements which increase the efficiency or operation in production, distribution and exhibition.

In order to effectively carry on the engineering and technical phases which embrace every factor of engineering and technique of motion pictures from production through to the time a film is projected on a theatre screen, total of 24 committees operate within the SMPE.

Because of the constant improvement and advance in motion picture engineering—especially in such a fast-moving industry such as films—the Society leaders early decided that semi-annual conventions were necessary. Under present policy, every third session is held in Hollywood in order to generate closer contacts between the research engineers of the east with those in the studios.

Ampro Slide Projector

Ampro Corporation of Chicago is introducing a post-war slide projector under trade name of Amproslide. Machine, taking two by two inch slides, embodies patented features which allows for easier and faster operation.

B. & H. Distributes Radiant Screens

Bell & Howell offices and sales organization will handle distribution of Radiant projection screens, according to joint announcement of the two companies.

An Ace Heads East

(Continued from Page 374)

improved cinema that we'll be working for. I'm staying behind that viewfinder because I can't see myself settling down to the life of a golf-playing country gentleman. The motion picture industry is too vital, too alive—I'd never be happy away from it."

The trip that Jimmy plans to make in the fall will be a sort of sabbatical leave from Warner Bros., where his contract has a bit longer to run. He will spend from six to eight weeks in the Orient setting the groundwork for his various film enterprises, so that when his Warner contract is completed he can take off permanently for China and the work he wants to do. When that day arrives, he will leave Hollywood taking with him a cargo of thoughts—thoughts of the past and of the future. He'll be thinking of the happy, exciting years he's spent in Hollywood, of the friends he's made, and of the light and shade he has been able to put on film. He'll be thinking, too, of a vast land across the sea where countless millions of people thirst for knowledge and news of the world outside. And he'll be happy, because he'll be bringing them that world on strips of film.

Unsold Back With Bell & Howell After Army Service

Major Robert H. Unseld, recently released from service with the Army Air Corps, has returned to the Bell & Howell organization as general advertising manager. Unseld joined B. & H. in 1935, and received successive promotions within the company until appointment to post of general advertising manager in 1939. He received leave of absence in early 1942 for service with the AAF.

Wollensak Optical Resumes Civilian Production

Wollensak Optical Co., having completed government contracts, is resuming full-time production of optical instruments. Because of retooling and other plant changes required for full return to normal production of civilian goods, only limited supplies of cine lenses, shutters, etc., will be available for some months, according to company announcement.

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Mitchell Camera Acquires Enlarged Factory

Mitchell Camera Corporation, which is noted for its manufacture of precision cameras for motion picture production, has acquired a completely modern building embracing 138,000 feet of floor space on a six-acre site at 666 West Harvard Street, Glendale, Calif. Included in the purchase is a wealth of precision machinery and equipment which, added to that already operated by Mitchell, will speed up production of the 35 mm. BNC production cameras, the new 16mm. professional cameras, and other apparatus for film production, including both 35mm. and 16mm. projectors.

Officials of the company state that the enlarged facilities will also permit greater research and experimentation in the camera and projector fields. And, as in the past, Mitchell will continue to work in close cooperation with studio cameramen and technicians.

The new factory will be formally opened on October 17th with a reception and buffet supper to which leading studio executives, producers, directors, cameramen and engineers will be invited. Feature of the evening will be a demonstration of the new Mitchell 16mm. professional camera soon to be available.

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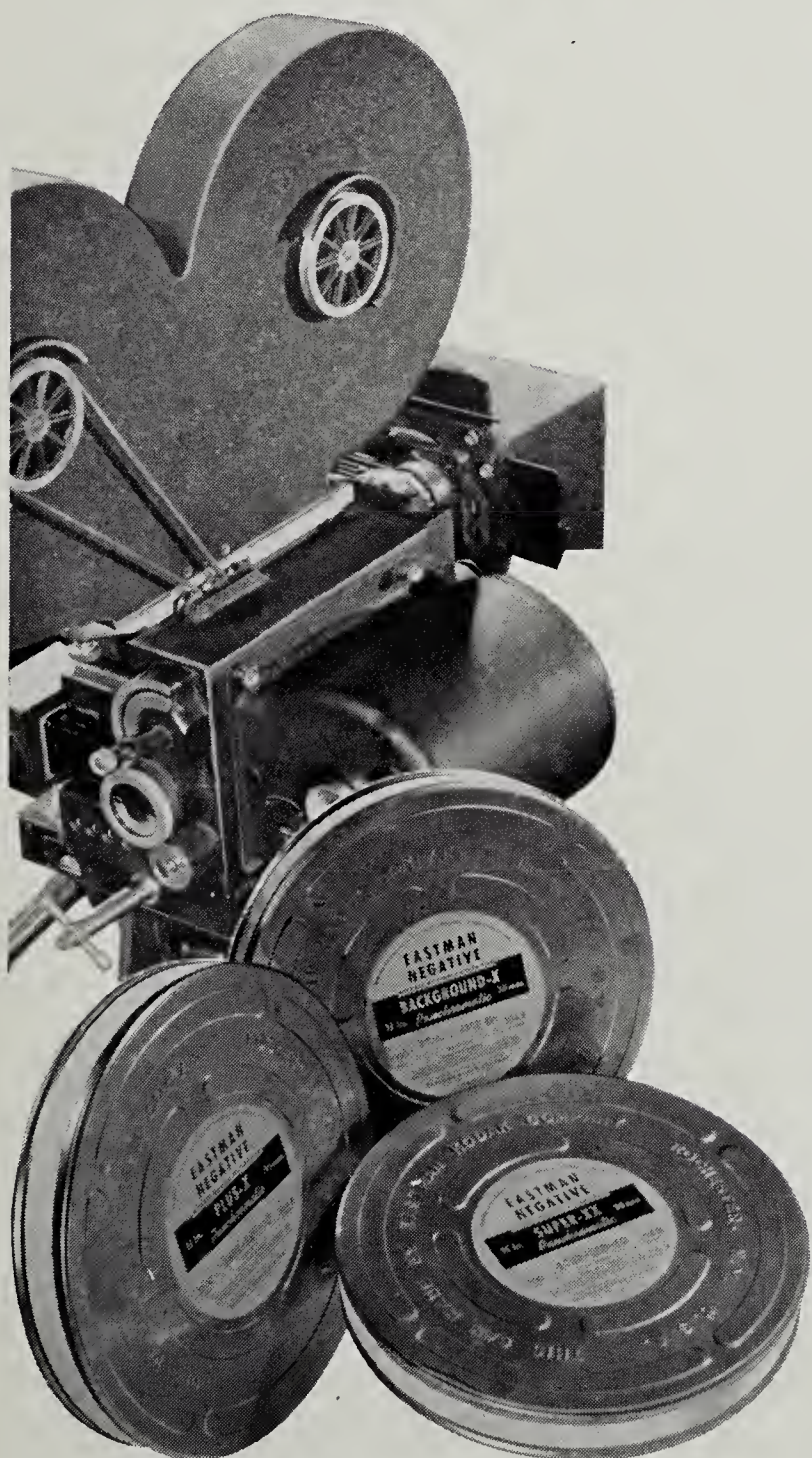
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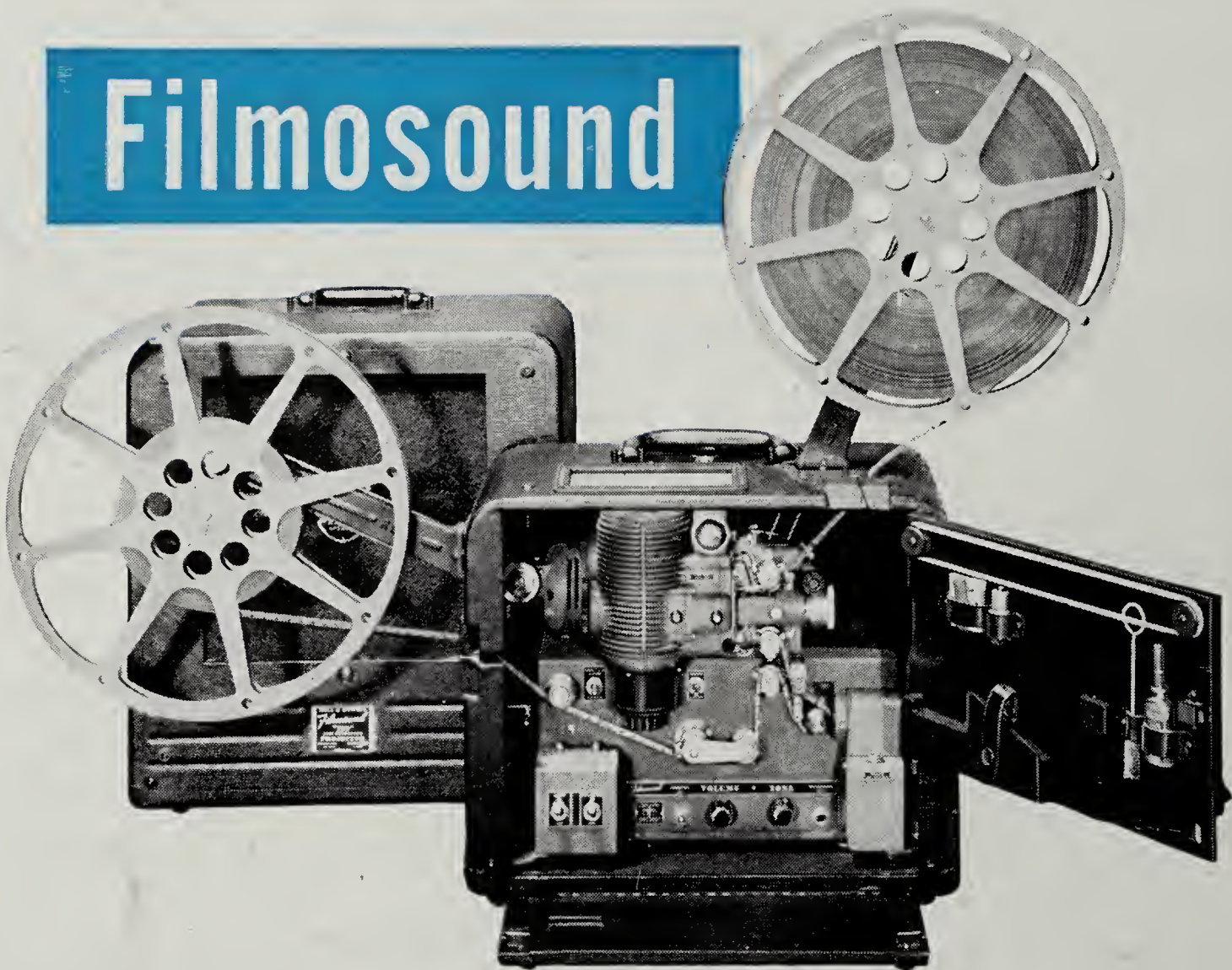
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NOVEMBER
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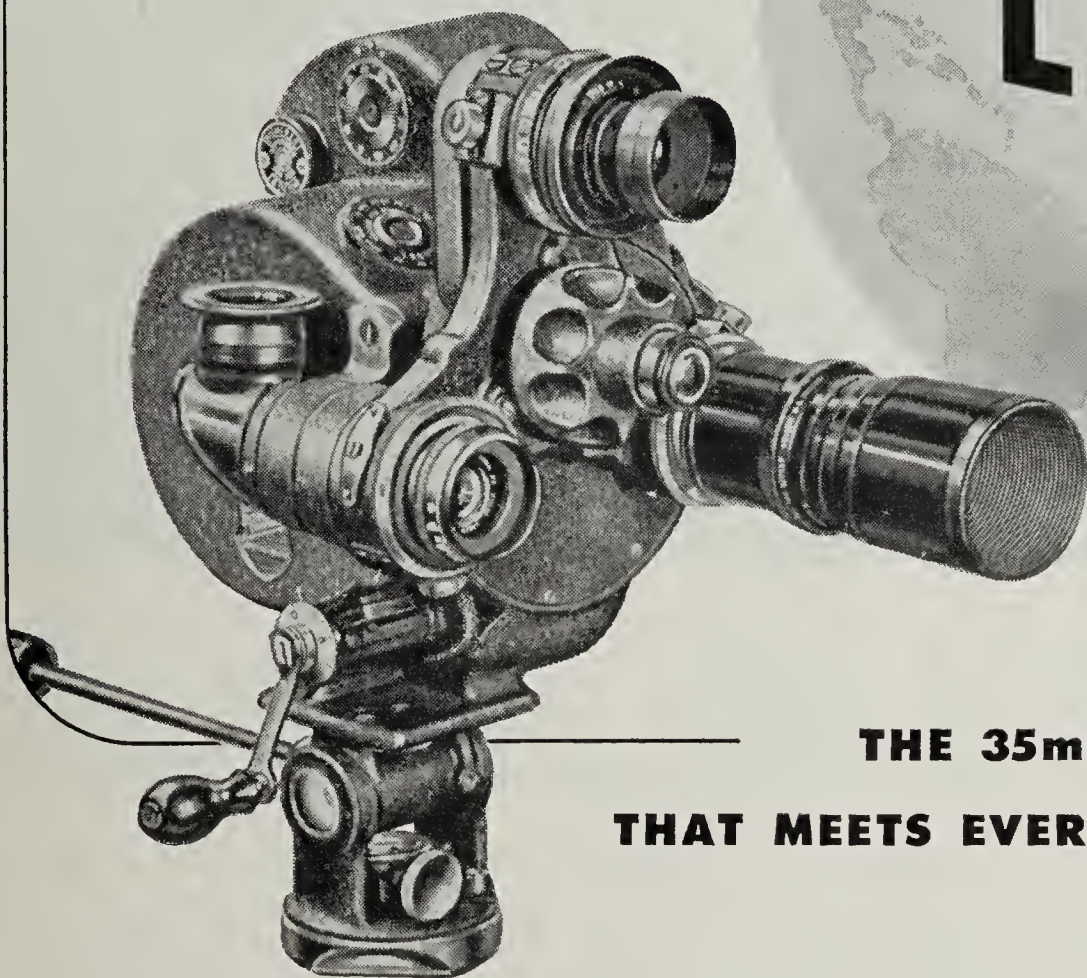


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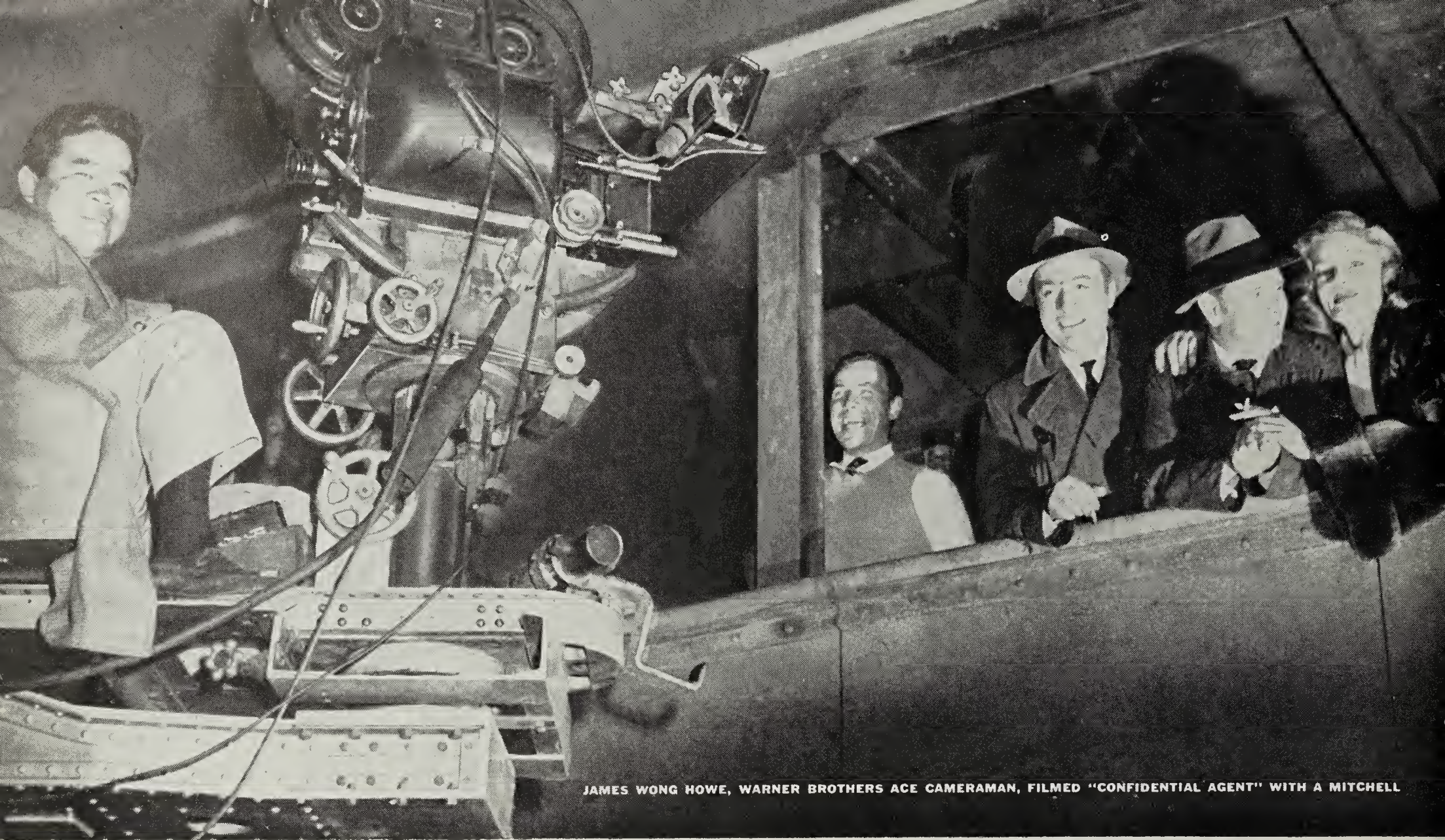
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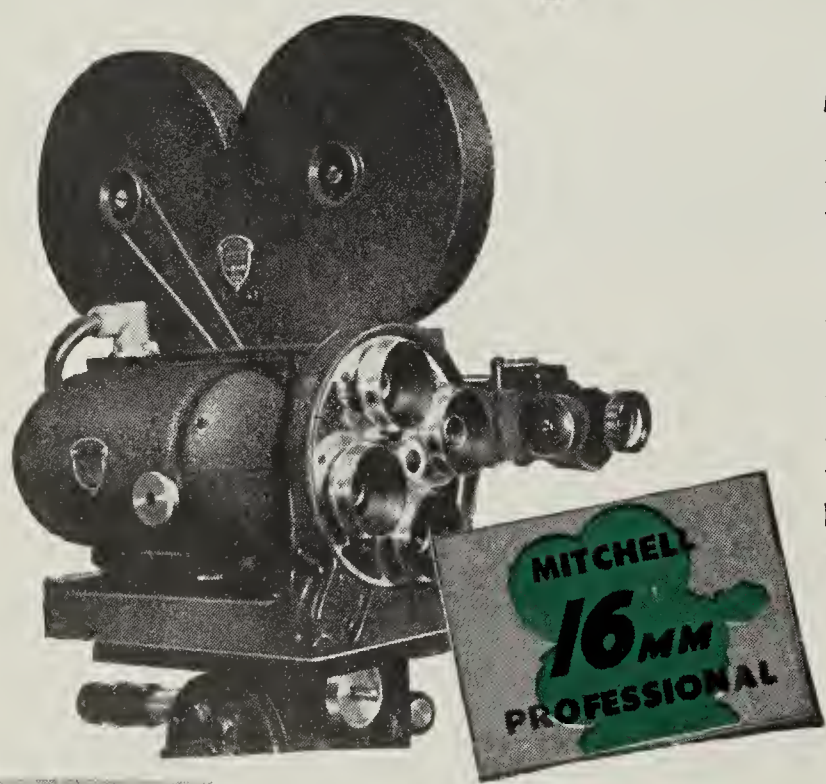
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AMERICAN INEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

NOVEMBER, 1946

NO. 11

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ON THE FRONT COVER—Fred Jackman, Jr., Director of Photography on Harry Joe Brown's Cinecolor production of "Twin Sombreros" for Columbia release, takes a lightmeter reading on Dorothy Hart; with co-star Randolph Scott an interested spectator. Michell camera at the left has been especially adapted to shoot the bi-pack (two color) Cinecolor method. Still by Irving Lippman.



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ONE of the best known, and certainly one of the best liked cameramen around the studios today is the always amiable, superbly competent Charlie Boyle; who changed his original by-line, Chas. Boyle, to the more mellifluous Charles P. Boyle, A. S. C.; not for the reasons of personal vanity, but for the very practical purpose of utilizing more space on the credit title. Such are the lengths to which self-respecting cameramen must go in order to get recognition.

In the 27 years that have gone by since Charlie first took his stance behind a camera he has been assigned to productions by most of the studios in Hollywood, both past and present, and has won for himself a niche in the cinematic Hall of Fame. But, as he sits with his charming wife in their North Hollywood home, does he ever wonder what might have been his fate had Paul Perry thrown a 'snake eyes' instead of a 'natural' during a certain momentous crap game at Balboa Beach?

You see, Charlie had not long been out of the army, and he was so fed up with the rigors of wet and cold weather, to which he had been exposed for four years in all its elemental unpleasantness, that, when he returned home to Illinois, he decided that he would most certainly remove himself to either Florida or California—but immediately. A friend of his, Paul Perry, who was even then achieving fame as a cameraman, had already located in Hollywood and urged Charlie to join him. Charlie wrote and said he would, if Paul could lend him \$100 with which to make the trip.

It seems that Paul received this letter when he was on location at Balboa, and had at his command a mere \$50. But it also seems that somewhere there was a crap game in progress. And so, with a sigh, and a final look at his last fifty bucks, strengthened in his resolve by the realization that this was for a good cause, Paul rolled once for fifty. A seven showed. And despite the loud protestations of the losers who thought they should have a chance to get their money back, Paul scooped up the winnings and, before he could change his mind, mailed it all to Charles P.

That little windfall brought Charlie out on the next train; and, once in Hollywood, Paul again came to the rescue by lining him up with an assistant's job at Paramount, to begin within thirty days. In the meantime Paul insisted that Charlie get the 'feel' of a camera and practice cranking. So, every day, for thirty days, Charlie worked out in the camera loading room with an empty camera and a stop-watch. By the end of that time he could crank at speed in his sleep.

When the picture started—it was "The Round-up," starring Fatty Arbuckle—Charlie wondered why Paul had him spend so much time learning to crank a camera. As an assistant he couldn't get near the crank. "Well," said Paul, "in this business it pays to



ACES of the CAMERA

CHARLES P. BOYLE, A.S.C.

By W. G. C. BOSCO

be ready for anything. You never can tell what will happen."

The words were strangely prophetic. It was December, 1919, and the great influenza epidemic was sweeping the country. The company was on location up at Lone Pine and its ranks were decimated. The Indian extras were going down like flies, and on the camera crew first Paul Perry, then his brother Harry, were stricken. The director was at his wits' end and decided that there was nothing to do but pack up and go home. But Charlie, whose life in the army had made him immune to everything, offered

his services. The director decided to give him a trial.

Having taken particular notice, during the few short days he had served as their assistant, that Paul and Harry had methodically changed their lens aperture at certain times of the day, Charlie did likewise. It seemed to be an infallible rule. In thirty days of shooting no camera retakes were necessary.

And so, within the short space of a few weeks, a lucky seven and a 'flu epi-

(Continued on Page 418)

New Motion Picture Equipment and Practices Disclosed at SMPE Convention

SOCIETY of Motion Picture Engineers celebrated its 30th anniversary with the greatest and largest-attended convention in the organization's history at the Hollywood Roosevelt Hotel, October 21st to 25th. The 10 technical sessions provided a wealth of information on new procedures, practices, apparatus and equipment via a total of 65 papers and demonstrations, to set a new record for a single convention.

Research scientists, engineers and technicians of manufacturers of all phases of motion picture equipment for production and exhibition, journeyed to Hollywood to give and receive vital information to accentuate the technical progress of the industry on a world-wide basis. Among the more than 250 out-of-town members attending were several from Europe, China, Canada, Central and South America.

Papers and demonstrations disclosed heretofore secret wartime developments in various phases of electronics and photography which can be adapted in many ways to increase the technical perfection of motion picture practices. Because of restrictions imposed by the SMPE in fully reporting papers delivered until after publication in the SMPE Journal during the coming six months, it is impossible to go into detail on subject matter of a number of pertinent papers, but highlights will be listed in the latter portions of this article on some of the important subjects dealing with cinematography and related practices, where basic information was available.

Ryder New President

Loren L. Ryder, director of Paramount Studios sound department and executive vice president of the SMPE for the past two years, has been elected president of the organization for 1947 and 1948, assuming office January 1st. Other new officers include: Earl I. Sponable of Movietone News, executive vice president; Clyde R. Keith of Electrical Research Products Division of Western Electric, editorial vice president; W. C. Kunzmann of National Carbon Co., convention vice president; Edmund A. Bertram of De Luxe Laboratories, treasurer; and G. T. Lorange of General Precision Laboratory, secretary.

New members of the board of governors, each elected for a two year term, include: David B. Joy, R. M. Corbin, Dr. C. R. Daily, Hollis W. Moyse, and John W. Boyle, A.S.C.

Pioneers Honored

For distinguished pioneering in the motion picture engineering field, on

recommendation of the honorary awards committee and approval of the Board of Governors, the names of Sam Warner, E. B. Craft and Theodore Case were added to the SMPE Honor Roll.

Members approved for Fellowship rating in the Society include: John W. Boyle, A.S.C.; Ralph B. Austrian of RKO Television Corporation; Edmund A. Bertram of De Luxe Laboratories; William F. Offenhauser, Jr., consultant to Columbia Broadcasting System; Thomas T. Moulton, sound director for 20th-Fox Studios; Lawrence T. Tachtleben of RCA-Victor Division, Radio Corporation of America; and A. Shapiro of Ampro Corporation, Chicago.

The SMPE Journal Award was presented to Ralph Talbot of Eastman Kodak for his paper, "The Projection Life of Film," which was published in the August, 1945 issue of the Journal.

Citations for Sound Pioneering

In recognition of the 20th anniversary of the first commercially successful ex-

hibition of sound films, SMPE President Don Hyndman presented Scrolls of Achievement to a number of companies concerned with the early development of sound. Those honored were: Bell Laboratories, accepted by Dr. Harvey Fletcher, Director of Physical Research; Dr. Lee de Forest, whose citation was accepted in his absence by Jack Gaines; General Electric Company, with S. E. Gates accepting; Metro-Goldwyn-Mayer Studios, acceptance by Douglas Shearer, director of sound engineering; Twentieth Century-Fox, with Earl I. Sponable accepting; Radio Corporation of America, accepted by Max C. Batsel; Western Electric Company, Inc., with vice president T. K. Stevenson accepting; and Westinghouse Electric Corporation, acceptance by vice president Charles A. Dostal.

Sam Warner Memorial Award

Warner Brothers Pictures will sponsor an annual award to be administered by
(Continued on Page 416)



President-elect Loren L. Ryder (left) is congratulated by retiring president, Don Hyndman.



Executives who accepted Citation Scrolls for their companies. Left to right: T. K. Stevenson, Western Electric Company; Earl I. Sponable, 20th Century-Fox Movietone News; Douglas Shearer, Metro-Goldwyn-Mayer; President Don Hyndman, who made the presentations; Max Batsel, RCA; S. E. Gates, General Electric Co.; Dr. Harvey Fletcher, Bell Telephone Laboratories, Inc.; Charles A. Dostal, Westinghouse Electric Corp., and Jack Gaines, for absent Dr. Lee de Forest.



DUPONT OFFICIALS. Left to right: Hollis W. Moyse, Myron A. Hatfield, M. Richard Boyer, Norman F. Oakley, Peter L. Shamray.



A.S.C. MEMBERS AND FRIENDS. Left to right: John Boyle, A.S.C., Colonel Nathan Levinson, Charles G. Clarke, A.S.C., Charles Rosher, A.S.C., Oscar Neu, William Prager, A. Shapiro.



ANSCO EAST-WEST EXECUTIVES. Left to right: Gerson Barth, Harold C. Harsh, Dr. H. H. Duerr, T. Keith Glennan, E. Allan Williford, Frank Hernfeld, J. Kneeland Nunan, Garland C. Misener, James Forrestal.



RCA ENGINEERS AND OFFICIALS. Left to right: H. D. Bradbury, Russ Little, Hal Maag, Dorothy O'Day, Art Blaney, Max Batsel, W. A. Wolfe, Barton Kreuzer, Dr. E. W. Kellogg.

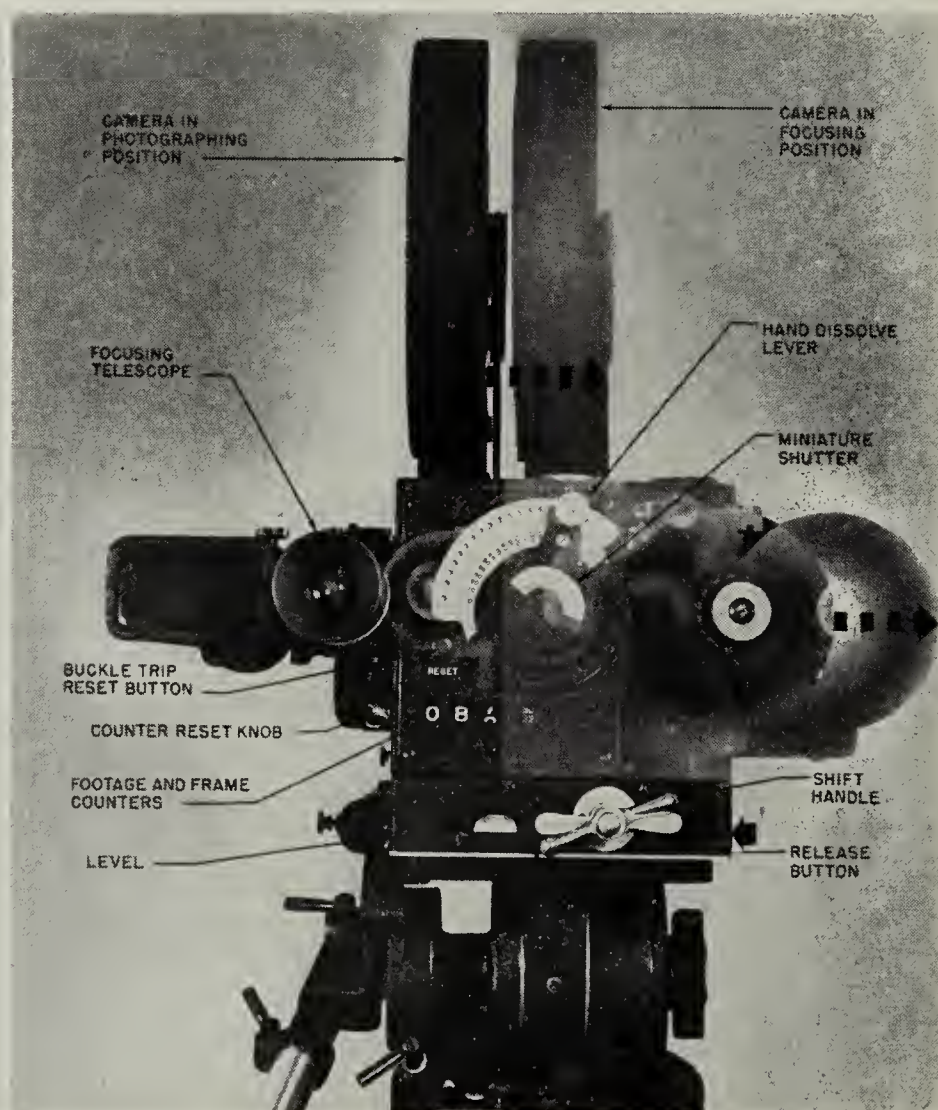
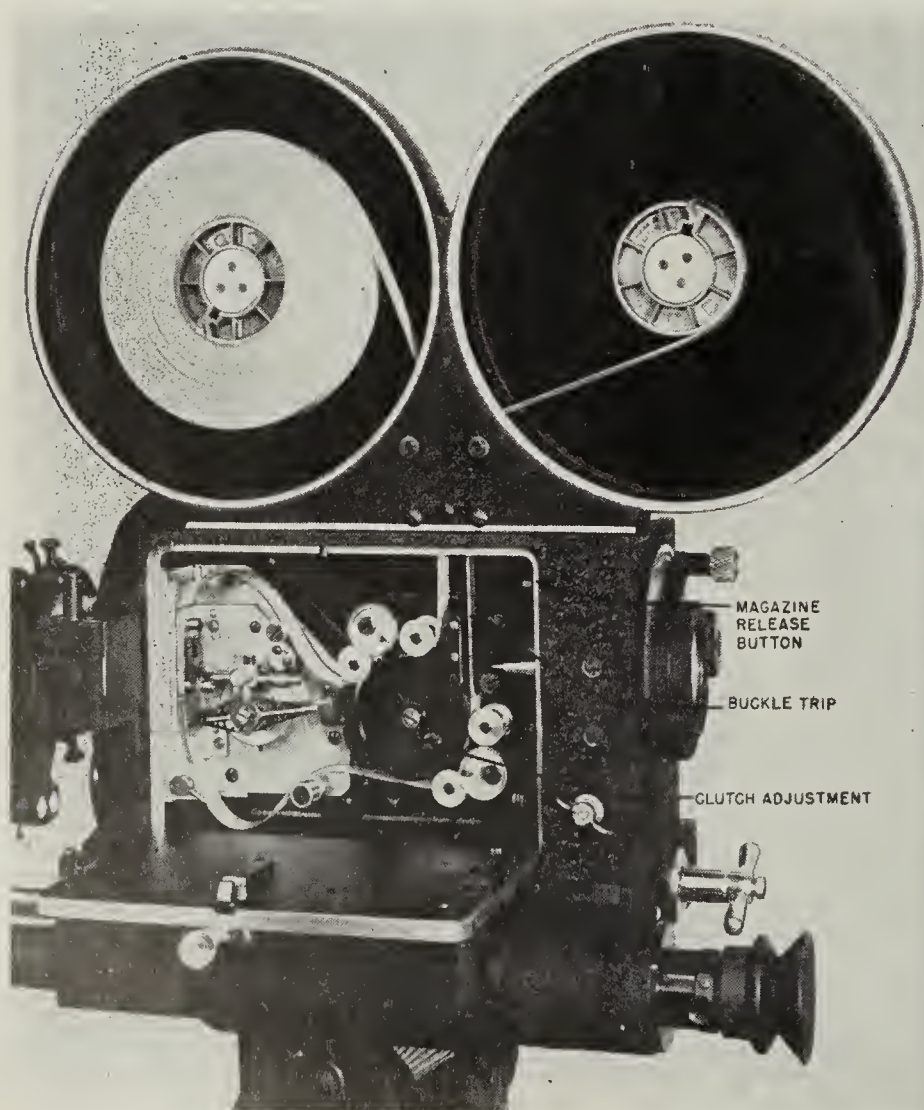


EASTMAN KODAK GROUP. Clockwise, starting at left rear: Robert M. Corbin, Norman Beach, L. E. Martin, Don Hyndman, Emery Huse, Dr. A. C. Robertson, Dr. E. Carver.

Photos by Filmcraft—Hollywood



AMONG A.S.C. MEMBERS WHO ATTENDED FORMAL OPENING OF NEW MITCHELL CAMERA PLANT: Winton Hoch, Wilfrid Cline, Lloyd Knechtel, Joe Ruttenberg, Paul Eagler, Ray Foster, Leonard Smith, James Wong Howe, Charles Clarke, L. William O'Connell, Tony Gaudio, Ray Fernstrom, Glenn Kerschner, Lee Garmes, Leon Shamroy, Karl Struss, Major Gilbert Warrenton Sol Halperin, John Boyle, Charles Rosher, and Harry Stradling.



SIDE AND REAR VIEWS OF THE NEW MITCHELL PROFESSIONAL 16MM. CAMERA.

Mitchell Camera Company Opens New Plant For Expanded Production

IN formally opening its new factory in Glendale, California, on evening of October 17th, Mitchell Camera Company not only publicly displayed a model of its professional 16mm. camera for the first time; but also disclosed that it would soon put into production, professional-type 16 and 35 mm. arc projectors for theatrical use.

More than 1,000 producers, directors, stars and cinematographers attended the opening ceremonies, and inspected the huge plant which will turn the Mitchell precisioned cameras and projectors, and other accessories. Greatest interest naturally centered on the new professional 16 on display, and many Directors of Photography who have used the Mitchell 35 mm. camera on film productions during the past 25 years, made test shots and enthusiastically approved the smaller edition of the famous Mitchell.

Company officials made it most convenient for the cinematographers to test the new 16 mm. camera. A desert set was installed in a corner of the plant, with models on hand to pose for various types of shots and lighting setups. Numerous members of the A.S.C. tried their hands at shooting short clips.

Mitchell executives announced that the new camera had been designed specifically to meet the increasing need for precisioned equipment in the professional 16 mm. production field. Joe Leo, vice president, stated: "The new Mitchell 16 will mean both higher standards of photography and reduced production costs to the 16 mm. producers."

Large Plant Fully Equipped

The new Mitchell factory is one of the most modern and complete on the west coast. It was built by the United States government for expanded production of Kinner aviation motors during the war, and is on a six acre site. The 140,000 square feet of factory space on one floor contains lathes, grinders, milling machines and other heavy equipment which is capable of turning out most highly-precisioned products. A large research laboratory is quartered on one side of the building.

Mitchell Products

BNC studio model camera, which has been used for many years as the standard on film production in the Hollywood studios.

NC standard silent production model camera for professional 35.

Background projector for studio production use.



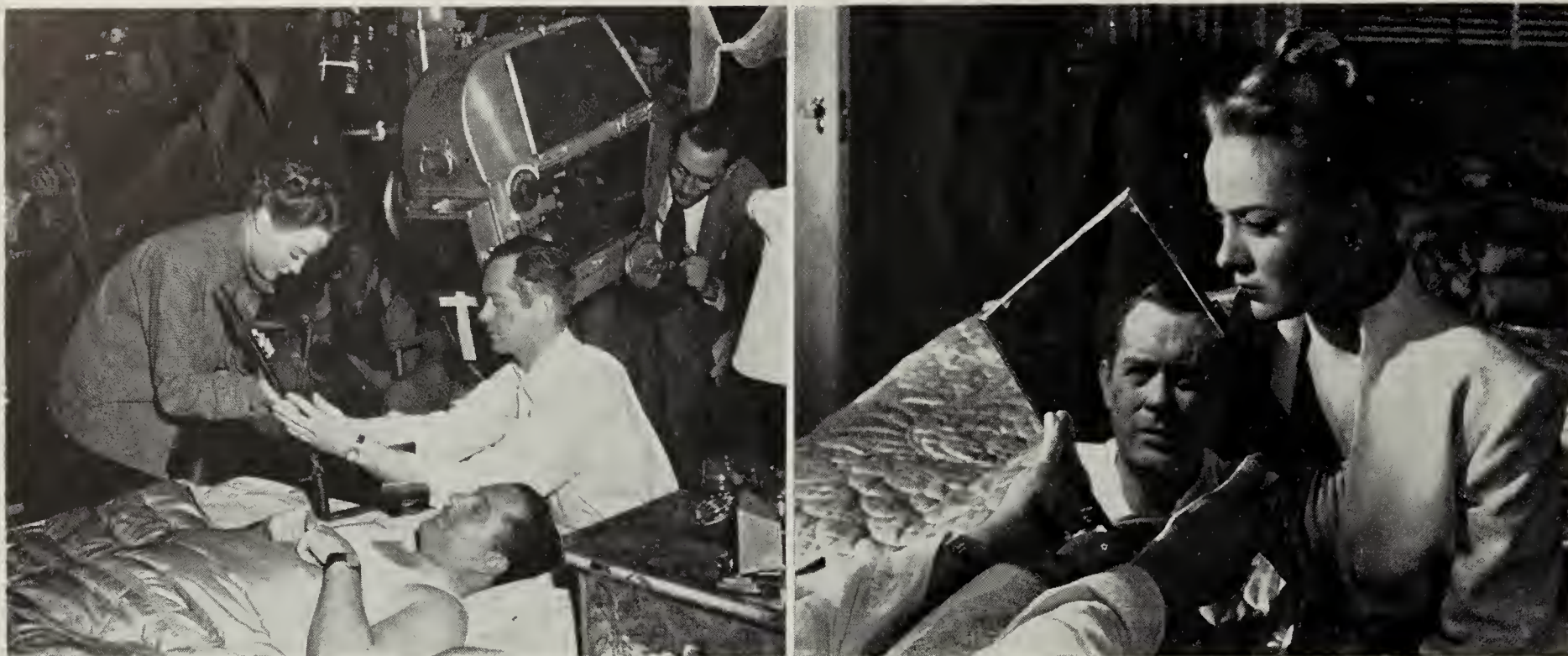
President Leonard Smith of A.S.C. lines up a shot with the Mitchell Professional 16 Camera.

35 mm. theatrical sound projector for theatrical use. (Shortly to be placed in production).

Mitchell 16 mm. professional camera, now in production.

Mitchell 16 mm. professional projector (shortly to be placed in production).

Now in the course of final design and tooling, a line of 16 mm. cameras and projectors for home movie makers.



Left—A set still from M-G-M's "Lady in the Lake," showing preparations for filming one of the subjective scenes of the picture. In this set-up Robert Montgomery is portrayed as waking up after having been knocked out in a fight. His own face is reflected in the mirror, but his stand-in plays the part of his "body". Right—an approximation of this scene as it appears in the picture shown subjectively (from the main character's viewpoint). Director-star Robert Montgomery appraises his battered face in the mirror, while his vis-a-vis, Audrey Totter, sympathizes.

M-G-M PIONEERS WITH SUBJECTIVE FEATURE

By HERB A. LIGHTMAN

RECENTLY in these pages there appeared a technical feature entitled: "The Subjective Camera," which dealt with a type of cinematic approach in which the camera assumes the viewpoint of one of the characters in the story. This article also suggested that it might be an interesting experiment to film a feature-length photoplay using the subjective technique exclusively, so that everything shown on the screen would appear as it looked to the eyes of the main character.

It was never, of course, presumed that a Hollywood studio would dare to take so radical a step—the requirements of "box-office" being what they are. Rather, it seemed logical that some experimental camera club or group would risk making a film of this type. But the improbable has happened, for it is actually Hollywood's largest studio that has dared to film the first completely subjective photoplay.

The name of the film is "Lady in the Lake," and it has just been completed at M-G-M by Robert Montgomery, who carried the dual responsibility of star and director. When it hits the nation's screens shortly, it will probably be hailed as the most unusual film ever made—because it is indeed *different*.

Murder Through the Camera-Eye

"Lady in the Lake" is a murder-mystery based on a novel by Raymond Chandler. It chronicles the adventures



This action shot, taken during the filming of M-G-M's subjective photoplay, "Lady of the Lake," shows actor Lloyd Nolan sparring with the camera in the sequence in which he gives the hero (i.e., the camera) a black eye. Director of Cinematography Paul Vogel, A.S.C., operates the specially adapted Eyemo, while director Robert Montgomery (right) supervises the action of the scene.

of a rugged private detective, Philip Marlowe, who continually becomes involved in physical conflict with the very murderous characters he is chasing. Naturally, there is a good deal of violence, with Marlowe frequently on the receiving end.

Had this story been filmed with the usual straightforward objective technique, the picture might have been just another celluloid *whodunit*. But, presented from the subjective viewpoint, it is very exciting screen-fare indeed, and tends to prove that Hollywood has not yet tapped the full resources of its creative ingenuity.

Assuredly it took courage to kick over the traces of cinematic convention and present this technique in a feature production. The idea can be credited to director Montgomery who had long wanted to try the subjective approach on a full-length film. It was also his personal campaign, coupled with intensive preliminary technical tests that sold the idea to the studio heads. Now completed and due for early release, the film is still an unknown quantity in terms of general audience reception, but technically, at least, it is a camera triumph.

As the plot of "Lady in the Lake" unfolds, the camera as the eye of the detective is called upon to do more acting than any of the live members of the cast. It engages in repeated fisticuffs, being periodically socked in the eye, bashed over the "face" with liquor bottles, knocked down and stomped on. It smokes cigarettes, makes violent love to the leading lady, and engages in a hair-raising automobile chase that ends in a crash.

Mr. Montgomery, the actual hero of the piece, is seen only in the few narrative continuity scenes, and subjectively when he happens to step before a mirror. Watching the film, you are at first aware that there is trickery afoot. Then, gradually, you find yourself becoming absorbed into the technique of the film to the point where you suffer or thrill right along with the hero. You see everything that goes on just as it looks to him (i. e., the camera).

A Challenge to Technicians

It can readily be seen that this sort of thing called for radical departures from standardized cinema technique. "Lady in the Lake" is a technician's picture, and as such takes a vital step forward in the development of original approaches to screen story-telling.

Special credit is due the M-G-M camera department, and more specifically to Paul Vogel, A. S. C., Director of Cinematography on the film, for clever handling of the required camera effects. This was Vogel's first studio assignment since his discharge from the U. S. Army Signal Corps in which, as a captain in charge of a special coverage motion picture unit, he filmed combat documentaries all over the European Theatre of Operations. He has brought to this film the freshness and spontaneity which



Paul Vogel, A.S.C., Director of Cinematography on M-G-M's completely subjective photoplay: "Lady in the Lake," demonstrates the specially adapted 400 foot Bell & Howell Eyemo used in the film's fight sequences. Fitted with a shoulder bracket, rigid brace extending to the operator's waist, and twin handles, the camera is usually steady and mobile. The modifications were designed by John Arnold, A.S.C., head of M-G-M's camera department.

the script's machine-gun pace and unusual approach demanded.

Foremost among the many camera problems inherent in the filming of the picture was the unusual amount of camera movement required in order to simulate the active meanderings of detective Marlowe. To accomplish this fluid effect, John Arnold, A. S. C., head of M-G-M's camera department, devised an especially mobile camera dolly with sets of independently controlled wheels at either end, much on the order of a fire engine hook-and-ladder. This dolly "walked" through doors, down corridors, and up stairs with great natural facility.

Fight sequences, in which the detective spars with his assailants and is finally knocked down, demanded an even greater mobility of camera. To meet this need, Arnold designed a special shoulder bracket and brace which he adapted to a standard 400 foot motor-driven Bell & Howell Eyemo. In this way, cinematographer Vogel was able to actually

"wear" the camera and spar realistically while doing so. As shown in the accompanying illustration, the Eyemo thus adapted would probably make an excellent combat camera, since it would eliminate the general complaint of service cameramen using the 100 foot model that they tended to run out of film just as they were warming up to a sequence.

New Camera Point-of-View

The matter of *perspective* was highly important in planning the camera approach to "Lady in the Lake." Tests were made with various focal length lenses and it was finally decided that the standard 50 mm. lens gave the most normal perspective. Difficulties relating to *depth of field* developed when, in certain sequences, it was necessary to show the main character's hands in the foreground of the frame, with strong plot action developing in the background. It was difficult to hold an acceptable focus in both planes.

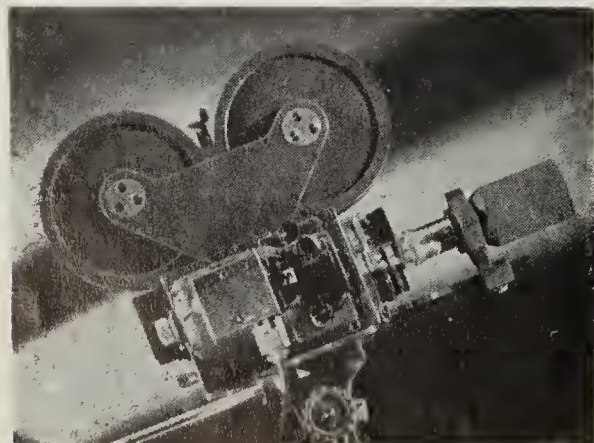
(Continued on Page 425)

IN the past few years there has been a marked increase in the direct 16-mm production of professional films. This increase, however, has failed to keep pace with the widening market for 16-mm motion pictures. One of the principal reasons for this relative lag in direct 16-mm production has been the shortage of 16-mm production equipment of professional quality. J. A. Maurer, Inc., in announcing the new Maurer Professional Motion Picture Camera promises to break a severe bottle-neck in the 16-mm field.

The Maurer organization, with 12 years experience in the design and manufacture of professional 16-mm cameras, has in its new camera added many features never before offered in a 16-mm camera, and several features that are entirely new to motion picture photography. Among the new features are an extremely critical high-power microscope focusing system, and an intermittent movement that provides accurate registration with a pull-down claw which registers the film at the end of the pull-down stroke. Other features include a rack-over mechanism for viewing through the taking lens, gear-driven film magazines, and a new type large view finder.

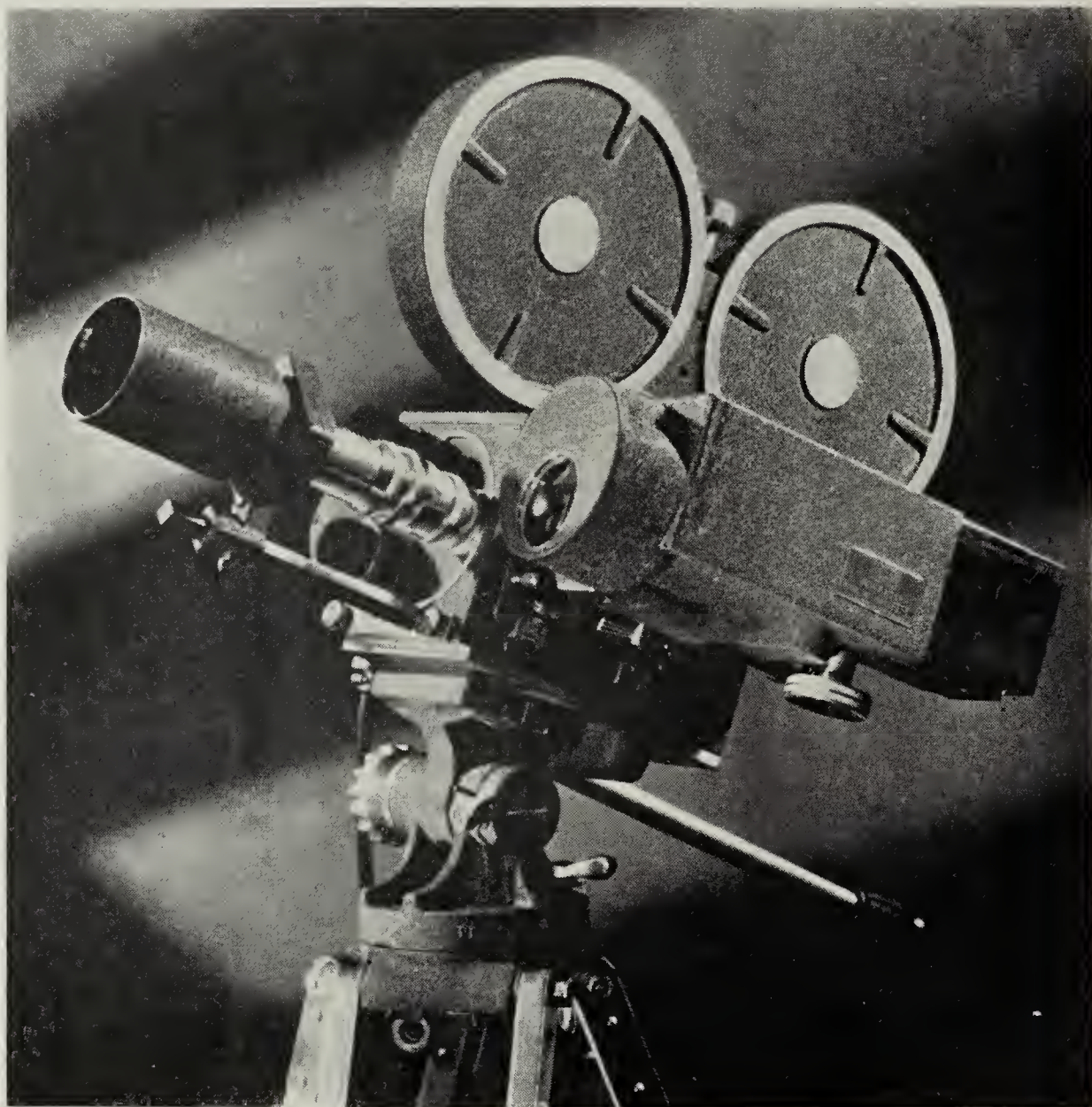
The view finder of the Maurer Camera gives a large erected and laterally corrected image $2\frac{1}{4} \times 3$ inch in size. The optical system works at F:5.0, giving an image that is brilliant over the full field. The $2\frac{1}{4} \times 3$ inch image is obtained for the 15-mm wide angle field, and for the standard 25-mm field. A set of four wires serves as a framing device for lenses of longer focal length. All four wires are controlled by a single knurled detent. The Maurer finder corrects for parallax automatically as the subject is focused in the finder. This eliminates an adjustment that has been necessary heretofore. The finder detaches from the camera very simply, permitting the director or cameraman to compose and view the set from different angles without moving the camera.

The intermittent movement of the new Maurer uses a pull-down claw that serves as a registration pin as well. The claw is made so that at full thrust into the film perforation it completely



Side view of Maurer 16.

Maurer Introduces New Professional 16mm. Camera



fills the perforation from top to bottom. At the end of the pull-down stroke the claw stops momentarily with the film, the film is thereby accurately registered, and the claw then withdraws from the perforation in a direction perpendicular to the film. The shutter then opens.

The new Maurer has a 235° maximum shutter opening, giving exposure of $1/35$ second at sound speed, or about $\frac{1}{2}$ lens stop additional exposure than is obtained with conventional 170° shutters. The shutter may be manually set to any angle less than 235° . Automatic fades or lap dissolves of 40 frames or 64 frames can be made by means of a control lever on the rear cover of the camera.

A rack-over device provides means of viewing and focusing directly through the taking lens. Racking the camera over places a clear glass reticle directly behind the taking lens in the plane of the film emulsion. A fine line etched on the reticle frames the projector aperture, as contrasted to the camera aperture. A picture can thus be composed knowing

what will be photographed on the film, and what will be projected onto the screen.

The new Maurer has a small internal turret by means of which the optics in the focusing microscope may be changed for different purposes. One turret position is used for viewing the field of 25-mm or longer focal length lenses. The second turret position gives a full view over the entire field with a 15-mm wide angle lens in taking position. The third turret position places a high-power microscope objective in the optical path giving a 175 diameter magnification of the center of the field for critical focusing. The image formed by the camera lens is brought into simultaneous focus with a pair of cross lines engraved on the reticle and lying accurately in the film plane. This method of critical focusing is more accurate than the usual method of employing a measuring tape in combination with a carefully calibrated focusing scale on the lens mount. It is also a quicker and

(Continued on Page 419)

1870

1946

Jules E. Brulatour

THE first day of shooting on any motion picture is usually fraught with tension. There are doubts of one kind or another in the minds of each person working on the film. The director is not sure that he will be able to establish his pace at once; his assistant is minus a thousand extras; the cameraman is certain that he will be either *under* or *over*-exposed; the actors have all forgotten their lines, and their minds are perfect blanks.

This kind of chaos is, up to a certain point, a normal healthy state-of-affairs. It indicates that all of the personnel are thinking seriously about the job to be done and are anxious to do it well. Out of the confusion of the first day (if pre-planning has been intelligently done) there should emerge a smoothly-functioning pattern of production.

Up until we reach the shooting stage, every phase of production is in *idea* form, either precisely detailed on paper, or firmly conceived in the minds of the technicians. It is *on the set*, however, that these various ideas are blended and translated into action. It is *on the set* that static words on a script come alive and actors begin to move and breathe as *characters* in a screen story.

There is no *one* right way to make a film. The procedure varies with individual directors, as well as with different subjects and types of production. Therefore, the following plan of set procedure is presented, not as the way to make a picture, but as *one* way of filming that has proven successful and practical in most types of picture-making. It is suggested that you take these Basic and necessary *general* methods of operation and adapt them to your specific type of filming.

In outlining the following methods of set routine, we shall suppose that you are shooting a more less pretentious type of semi-professional film (as distinguished from "home movies"), and that it entails both interior and exterior sequences. We shall further assume that you have available sufficient personnel to specialize the various jobs that have to be done.

Before the Cameras Roll

It is the first day of shooting, and according to the detailed shooting schedule, interior scenes are to be filmed today. The cameraman and his assistants are the first to arrive on the set. While the cast is climbing into costumes and make-up, the camera crew is busy setting up equipment and placing lights. The preliminary placement of lights and camera follows the diagram as sketched in the "dope sheet" for that scene (which we discussed fully under *Production Planning*). The lighting is "roughed in" according to the sketch, with the understanding that it will be more precisely set later during action rehearsals.

While this is going on, the prop man is checking his list to see that everything required as an action prop or set dressing is available. He will want to

avoid having to interrupt shooting because some prop turns up missing just as the cameras are ready to roll.

Meanwhile, the sound crew will be checking their equipment to insure its proper functioning. They may also tentatively place their microphones and sound booms to get them into their general locations before the action rehearsals begin.

At about this point, you, the director, arrive on the scene. If the cameraman, for instance, has set his camera in a bit too close, or if he has misunderstood the key of the lighting chart, you proceed to set him straight on it. If the prop man can't find one of the required Siamese elephants, you discuss possible substitutes with him, etc.

Then, you and your assistant sit down together in a corner of the stage and proceed to review the requirements of the day's shooting. You discuss the notes you have previously made on the scheduled scenes. You thrash out any last minute inspirations that might have developed. If there is any doubt as to the effectiveness of a planned technique, you devise an alternate that might be tried in case difficulties develop.

Your assistant may have a few questions as to the pace or movement of the background action, which it will be his job to direct. These and other questions you can answer for him at this time.

"Walk-through" Rehearsals

Now your actors have arrived on the set, all made-up and costumed. You check their appearance carefully to see that everything is as required in the script. If any of them have any doubts or questions about the scene to be filmed, you can clarify the uncertainty then and there.

The actors make a last minute check of their lines and action (which they are supposed to have memorized during the pre-shooting rehearsals), and you are now ready to conduct a "walk through" rehearsal of the scene. This consists of running through the dialogue coupled with the actions, in order to synchronize the two, and indicate in which areas of the set each bit of business is to be played. The actors recite their lines, but make no attempt at this point to interpret them dramatically, nor do they elaborate on the basic action of the scene.

The Cinema Workshop

(For Semi-Professional and Amateur Production)

5. On the Set

By CHARLES LORING

Meanwhile, the technicians take advantage of this rehearsal to polish their arrangements. Perhaps the cameraman will find that he has neglected to light the corner where the hero's most significant action takes place. The sound man may well find that his microphone cannot follow the leading man unless the pace of his movements is slowed down a bit, etc.

When the walk-through rehearsal has been polished to everyone's satisfaction, a short time-break is called. This is an important interval. The cameraman may ask the leading lady to pose in place while a certain light is adjusted. (In the professional studios, standins are used for this. But your actors will probably have to do their own roasting under the lights.) As soon as the lighting is okayed, the still cameraman steps in and takes record shots of the set and the actors as they appear in the sequence, so that their appearance can be precisely duplicated from day to day during shooting.

The camera crew will be making a final check of its equipment. The sound crew will have set its instruments for the proper voice level. Someone will stand ready with a make-up kit plus a needle and thread to make last minute repairs in make-up or costuming. The script clerk will be ready to take secretarial notes on all the details of shooting plus any last minute changes that are made during filming.

Preparation for the "Take"

You now take your cast aside, sit them down in a quiet corner, and proceed to give them a final "pep-talk." You explain the mood and pace of the scene. You briefly sketch for each actor the point-of-view of the character he is playing at this particular stage of the narrative. You talk quietly, but with imagery, getting your players into the mood.

Everything is now ready for the final rehearsal. This time your actors go through the dialogue and action, giving their full interpretation of the scene as it is to look on the screen. They include all of the little nuances of expression, the pauses, the emotion—everything to give the scene body and depth. You quietly make corrections if there is something that is not quite right. Avoid

(Continued on Page 423)



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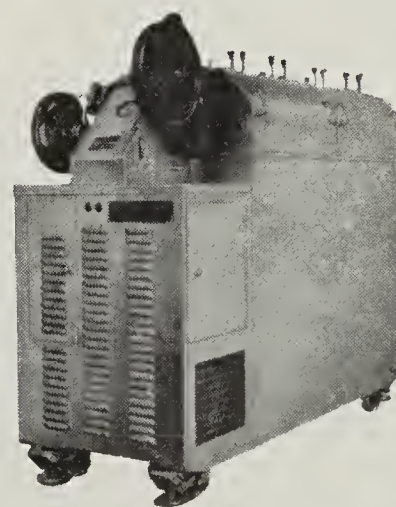
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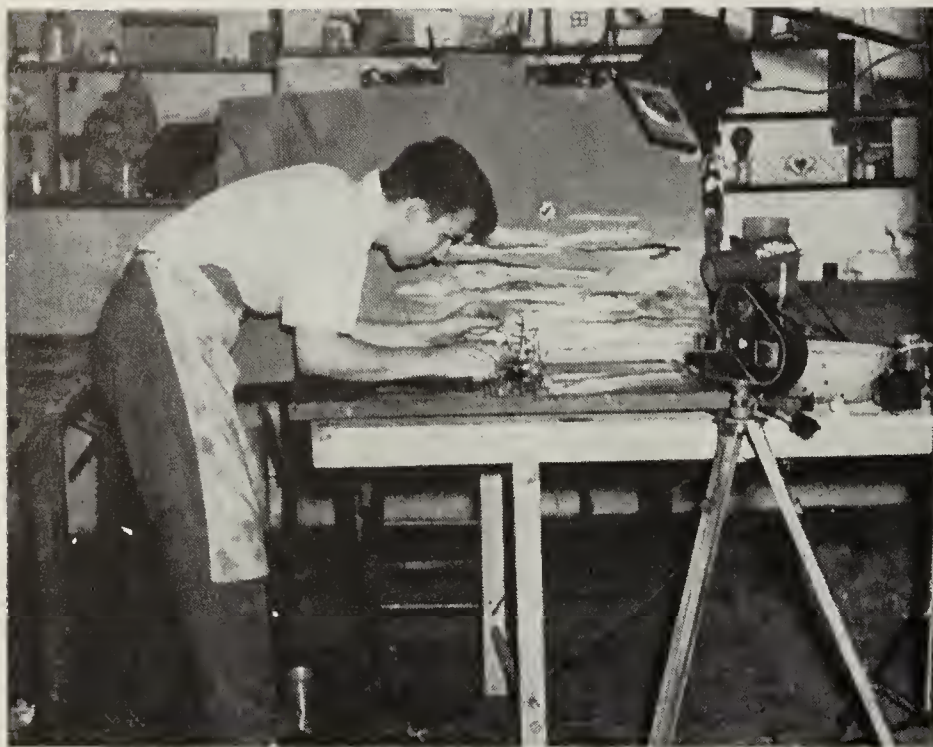
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Producer-director William Gernert puts finishing touches on model sea for long shots.



One of the many typical sets constructed for "Treasure Island."

Nashville's Youthful Film Enterprise

By ROE FLEET



WILLIAM GERNERT is founder, director and art director—also president—of W. G. Pictures Studios located on Caldwell Lane, Nashville, Tenn. The latter, only motion picture company in Nashville, is composed entirely of boys in their 'teens; but their enthusiasm and three years' progress since launching the enterprise, is particularly noteworthy for passing along to other amateur cinematographic enthusiasts.

Seventeen-year-old William Gernert's initials grace the impressive title of the company. Young Gernert has unusual talent for creating ideas, and an artistic touch for realism. Make the film look real or abstract and in perspective is William's basic idea. Sixteen-year-old

Craig Faulkner photographs the miniature productions, is chief cameraman, and responsible for special color and lighting effects. Assistant photographer and art director is John Payne, whose head is always whirling with new ideas, tricks, and photographic effects for the productions of the company.

Currently deep in the actual production and shooting of Robert Louis Stevenson's "Treasure Island," the W. G. group works out its own sets, creates puppet characters, and films the pictures either in black-and-white or color (16mm.)—all in their combination studio, production office, and projection room in the large basement of the president's home. The studio embraces half a dozen stages—naturally small for the

production of puppet films, an office, film room, and quarters for sketching, costuming and designing of props. "Treasure Island" is being photographed in black-and-white, and is slated to run about 750 feet. The sound system is supplied by means of recordings which are purchased before the individual film subjects are created. Thus action and dialogue is built around the music mood of stories suggested by the records; and all takes are properly synchronous for action to be in time with the film.

Among the many techniques used are fades, lap dissolves, boom and dolly shots, etc.; pictures are produced with a professional touch throughout. W. G. members are very particular about back and side lighting. Although an Eastman Kodak camera is currently being used, the hope is for eventual acquisition of a new Mitchell 16mm. professional model, so the youthful producers can "let go" and put all of their ideas onto the films they plan for the future.

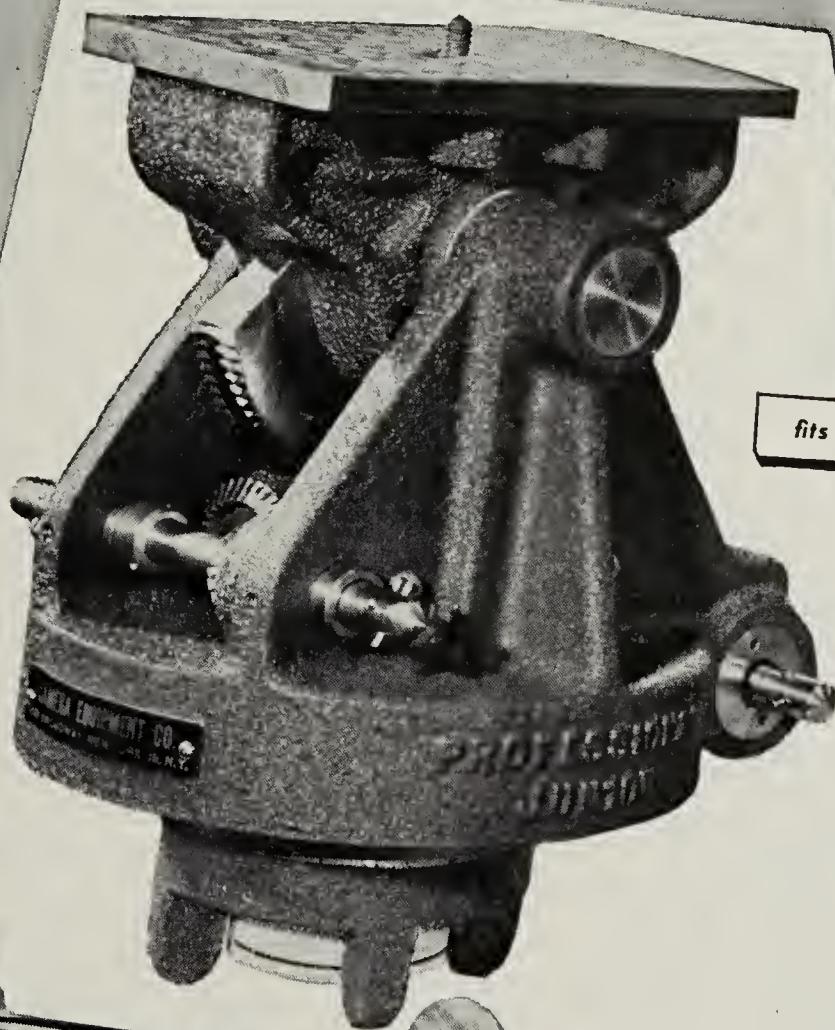
Working mostly on Saturdays, the young movie magnates are now on their fifth production, the first having been "Pinocchio." Second venture was "Lady in the Dark," which was done merely for practice, and because the trio were all so enthusiastic over the original film production. This film is only shown for personal pleasure. Third film was "A Christmas Carol," and the fourth ventured into color with "Alice in Wonderland."

A picture is initially created through the selection and purchase of records which are chosen for story idea presented, and the sound effects or music background. From the records, the script is prepared. Then a meeting is held for playing the records over and over for ideas and suggestions on the final script. Sketches are then drawn of each scene and assembled on a large bulletin board for general discussion and final approval. William then asks for opinions on the possibilities of shooting the subject, and if it would be the type carrying audience

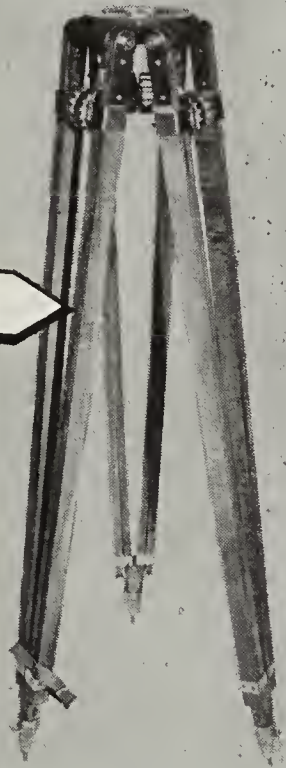
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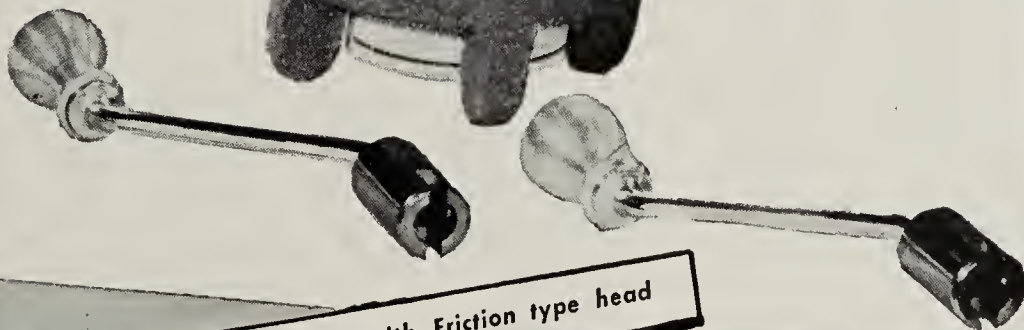


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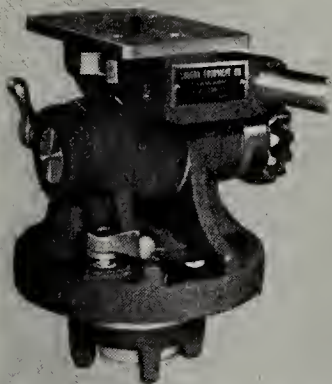


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appeal. Research is presented on story period and costumes, after which the most important report of the treasury is presented to determine whether the budget can manage the cost of each individual scene and sequence, and the overall production.

From the original sketches, full color drawings of the costumes are created, and usually a good consultant on costuming is called in for suggestions and criticism. Next conference discusses the matter of photographing in color or black-and-white. If the costumes are too dark for dark backgrounds in black-and-white, adjustments must be made. Aim is to create well-balanced scenes. If a background is light, the character under consideration must be darker. Conversely, dark backgrounds necessitate lighter characters.

The photographer and assistant work on good compositions and different angles that will carry more visual appeal and create the feeling of third dimensional effect. The director and photographer confer on times for camera movement, and huddle on fades, lap dissolves, etc. and rightful places of each in the picture. Such meetings may continue for hours, and often problems are "slept on" before decision of the group is arrived at. Rehearsals are then staged for proper timing of the marionettes' actions with mechanical action on the set itself. Lighting is also checked at this time for utmost effectiveness.

On the set of the chubby and large 18th century British vessel about nine feet long (in scale with size of the small marionettes) created for "Treasure Island," the problem was presented of lighting the tiny lanterns at the stern of the ship. Solution came, however, with insertion of Christmas tree lights in the balsa and cellophane lanterns. Then, the moon in the background for night scenes presented another lighting problem, but, a circle was cut out of the background

and a piece of gauze was placed on the reverse side with a light behind to throw an even glare over the moonlight scene desired.

If closeups are desired, producer William makes two characters of the same figure—one character for distant shots and the other twice as large for closeups. The larger figure allows for addition of more detail such as eyelashes, lips that look moist, and hair with every curl in place. It might be pointed out that the characters move their mouths by means of manipulated strings.

Sets are really one of the highlights of the youthful film producers. Scripts have been used calling for sets anywhere from a theatre to a large 18th century sailing vessel. In "Alice in Wonderland," there was a courtroom set which took more than a month to construct with a golden ceiling chandelier of 50 small candles (chandelier was constructed from an old candelabrum and matching sidewall brackets.) The courtroom was adorned in pale rich sky blue with gleaming white columns and woodwork, and old gold fixtures. Floor pattern was large red and white checks that had a smooth mirror-like surface; throne was elevated somewhat with circular steps and trial boxes with large hearts on the front, while a large window from floor to ceiling was behind the throne. Outside the gaping window was a mist of clouds which provided a spell of mystery.

"Treasure Island" is expected to be the most ambitious black-and-white film yet produced by the W. G. trio, with improved dramatic lighting and other techniques. Work has already been started on rough ideas on character creations and set suggestions for "Cinderella," their next production which is to be in color. It will be a super, with the budget expanded considerably for creation of the best in lighting, costuming and massive sets. Some of the latter already roughly

planned are a huge ballroom, a wedding scene, and the interior of a stage coach.

In "Alice in Wonderland," the trick of reversing the camera upside down was employed to shoot a scene of chartreuse mist of clouds in which a deck of cards were to rise up in the air and come flying down on Alice. The scene was photographed upside down, and later turned around and spliced in with the other shots originally made normally. This gave the desired effect of the cards flying up. The "falling machine," a background painted scroll that was rolled behind Alice, was successfully devised and employed to picture her falling through space.

Members of the company are most serious about their work, and never cease to expand production quarters and add to equipment. The office is a maze of neatly-typed scripts, set drawings, character sketches, half finished properties, and shelves of technical books and pamphlets. The W. G. sign is evident on almost everything—from the cameras and the door of the special projection room, to the smallest piece of equipment.

After the current "Treasure Island" is completed, production will start wheeling on "Cinderella." "The Selfish Giant" and a few original scripts are also tentative for future production activities.

It might be pointed out that the production accomplishment of the W. G. group is noteworthy. A local playhouse booked one of the pictures for a five-day showing with marked success, and there have been a number of invitations for out-of-town showings.

And what of the future? Ambitions of the company members are pointed towards Hollywood and honest-to-goodness jobs in the film industry as director-producer, cameraman, art and set director. In fact major league status for the chores each is now holding in the miniature movie firm of W. G. Productions in Nashville, Tenn.



Craig Faulkner, chief cameraman, editing film.



On the set of "Treasure Island."

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Home Movies, Portraits and
Table-Top Photography

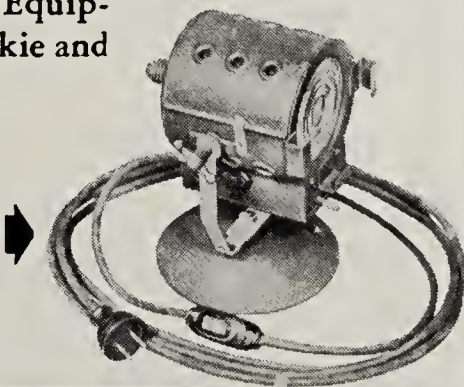
Something has been added...at the request of Hollywood Camera Men...to the Bardwell & McAlister line of Photographic Lighting Equipment ...It's the Dinky Boom!

On motion picture sets, among the home-movie fans, and everywhere that fine photography is produced, the Dinky Inkie, that handy little 150 Watt Spot, has been standard equipment. Now its use has been made much more flexible by the Dinky Boom which makes an infinite number of lighting arrangements and angles easy to obtain. The Dinky Boom comes equipped with a standard Dinky Inkie Spotlite.

With the Dinky Inkie you can highlight portrait subjects by concentrating a smooth, graduated light exactly where it belongs. You can get the greatest degree of flexibility in modeling close-ups. You can eliminate shadows in dark corners and virtually "paint" with light that is under control at all times.

For fine photography there is nothing better than Bardwell & McAlister Lighting Equipment. For good work, the Dinky Inkie and the Dinky Booms are "musts".

This wonderful little spot operates with 150 watt T-8-DC globe; focuses from on 8 degree spot to a 44 degree flood. It has the same back and front handy focusing lever as the Baby Keg-Lites. With base removed, it fits any standard tripod. Total weight 2¾ pounds.



Check These Features THE BOOM

- 1** Maintains constant angle of adjustment in all positions up to 45° angle from vertical.
- 2** Boom has telescoping extension.
- 3** Thrust bearing with fibre friction disc at balance point holds boom rigid in any position without making thumb-screw adjustments.
- 4** B & M folding-leg-type stand.
- 5** Nine foot six inch extension.
- 6** Weight 17 pounds.



Write for literature describing the Bardwell & McAlister line of Photographic Lighting Equipment. There is a light for every possible need. Ask about the Senior 5000-watt Spot, the Junior 1000-2000-watt Spot, the Baby Keg-Lite 500-750-watt Spot, the Single and Double Broods, the Foco-Spot, Snoots, Barndoors and other light control accessories. Address Department



BARDWELL & McALISTER, Inc.

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AMONG THE MOVIE CLUBS

Brooklyn Amateur Cine

Charles Coles delivered a talk on "Exposures and Exposure Meters" at the October 16th meeting of Brooklyn Amateur Cine Club, held at 1218 Union Street. Coles also showed two of his films, "Jasper Road" and "Outposts of the West." Other picture on the program was C. M. Booth's "Campers Paradise."

Brooklyn is lining up a Quiz program for a future meeting which could easily be adopted by other clubs for added interest and information of members. Brooklyn is soliciting questions from members on movie problems, and when sufficient number are received program will be staged at a meeting. Club roster will be divided in half, with the experts on one side being tossed the questions from the other group. Then the situation will be reversed, with the former questioners becoming the experts and question answerers. It looks like a swell idea that should click solidly as a new feature of club meetings.

Members of Brooklyn Amateur Cine walked off with the bulk of prizes at the recent Mineola Fair. Six BAC members entered 10 films in the Fair contest, and each film won an award. Recipients were, Sam Fass, Francis Sinclair, Herbert Erles, Horace Guthman, Charles Ross, and Charles Benjamin. Latter won three prizes, while Erles and Guthman tabbed two each.

St. Louis Amateur

President Leslie Easterday chaired the October 11th meeting of Amateur Motion Picture Club of St. Louis, held at the Roosevelt hotel. Film program comprised: "New Orleans," 8mm. kodachrome by Irma Kaiser; "A Camera Widow's Revenge," 8mm. monochrome which is the latest production of Overland Movie Club of Overland, Mo.; and "Nantucket," 16mm. kodachrome by Russell Pansie, loaned by ACL film library.

Added attraction was educational session on titling, with Werner Henze, S. James Bialson, and C. E. Talbot speaking on various phases and methods of title making. Each illustrated with film clips.

San Francisco Cinema

An all-club program of films highlighted the October 15th meeting of Cinema Club of San Francisco, held at the Women's City Club. Eric Unmack started proceedings with a talk on lighting, stressing artificial lighting for interiors and demonstrating with his own equipment. Films included: "Magic Mush," (8mm. kodachrome), by Unmack; "Shriner's Parade" by new member Gabriel M. Tabet; and "Everchanging California," a 1,000 foot 16 mm. kodachrome subject by Leon Gagne.

Metropolitan Club

Regular meeting of Metropolitan Motion Picture Club of New York City was held on October 17th at Hotel Pennsylvania. Film program of the evening included: "Alpine Vixen," by Anchor O. Jensen, judged one of the 10 best of 1945; "Backyard Zoo," by Francis M. Spoonogle, a 1945 Honorable mention; "Worth Scouting For," by Al Morton, a 1945 Ten Best; "The Heavens Declare the Glory of God," by S. G. Lutz, a 1944 Ten Best; "Mr. X," by Norman Brown; and "Handling Casks With the Ford Truck."

Supplemental meeting on October 2nd presented George H. Espy of Weston Electric Co. who explained the proper use of the Weston meter for best results in both black-and-white and color. Espy illustrated his paper with stills in both black-and-white and color.

Philadelphia Cinema

Philadelphia Cinema Club staged a triple-feature program for its meeting of October 8th, held at Franklin Institute. Gadget Night presented an interesting and informative exhibition-demonstration of movie making gadgets devised by members. Second attraction was a talk on timely suggestions about movie making, together with simple tricks that any enthusiast can adapt. Climax was films made by Fred A. Murray while in the armed services abroad. Murray's subject by-passed battle action entirely, and concentrated on the countryside of North Africa, Normandy, and England.

Seattle Movie Club

"Redouble Trouble," produced as a club activity by Amateur Movie Society of Milwaukee, was presented at the October 8th meeting of Seattle Amateur Movie Club, held in Parish Hall of Church of the Epiphany. Interesting experiment was conducted, with showings of member films and audience noting questions on editing, titling, exposure, etc.; questionnaires were graded later, which provided average audience grade for each individual film rating. Other subjects on the program was report on Cine Workshop meeting, and discussion of doctoring vacation footage.

Utah Cine Arts

Home movie night featured the October 16th meeting of Utah Cine Arts Club held at Teamster's Hall, with members running off 50 foot 8mm. and 100 foot 16mm. rolls of unfinished and untitled subjects for runoffs. "All Around the Town," by Lon Wadman of St. Louis Movie Club, was the film feature of the evening.

Milwaukee Amateur

Amateur Movie Society of Milwaukee is one of those progressive clubs with such intense member interest that two meetings a month are held at the Red Arrow Club. Delegation from the Metro Movie Club of River Park, Ill., drove over to present two kodachrome subjects—"Reverie" and "Invisible Builder" for the October 9th meeting. Fred W. Kennert presented his 8mm. color subject, "Beautiful Colorado" at the October 23rd meeting.

Civic movie projects of club members are highlights in the AMS widespread activities. Mrs. Mortag made a picture "Girl Scouts at Day Camp" during the summer for the Girl Scout office of Milwaukee County; and followed this up with film record of the Civil Air Patrol of which her son is a member. Mrs. Gertrude Militzer and Miss Artha Rosche recently presented the film of the construction progress of the Junior Club of Milwaukee which was photographed by Norville Schield and other members of AMS.

Los Angeles Cinema

Member P. L. (Jack) Goddard thrilled members of Los Angeles Cinema Club at the October 7th meeting held in Fine Arts Hall of Ebell Club, with his 16mm. travelogue, "Off The Beaten Track in Central Americas." Goddard, a recent president of the Adventurers Club of Los Angeles, went into untravelled jungles and mountains of Nicaragua, Guatemala and Mexico, with his son Jack to secure the sensational film. Added attraction at the session was a series of 35mm. kodachrome slides of "Zion, Bryce and Grand Canyon National Parks" presented by Aldis D. Waltz. According to club announcement, entries for the annual contest close November 15th.

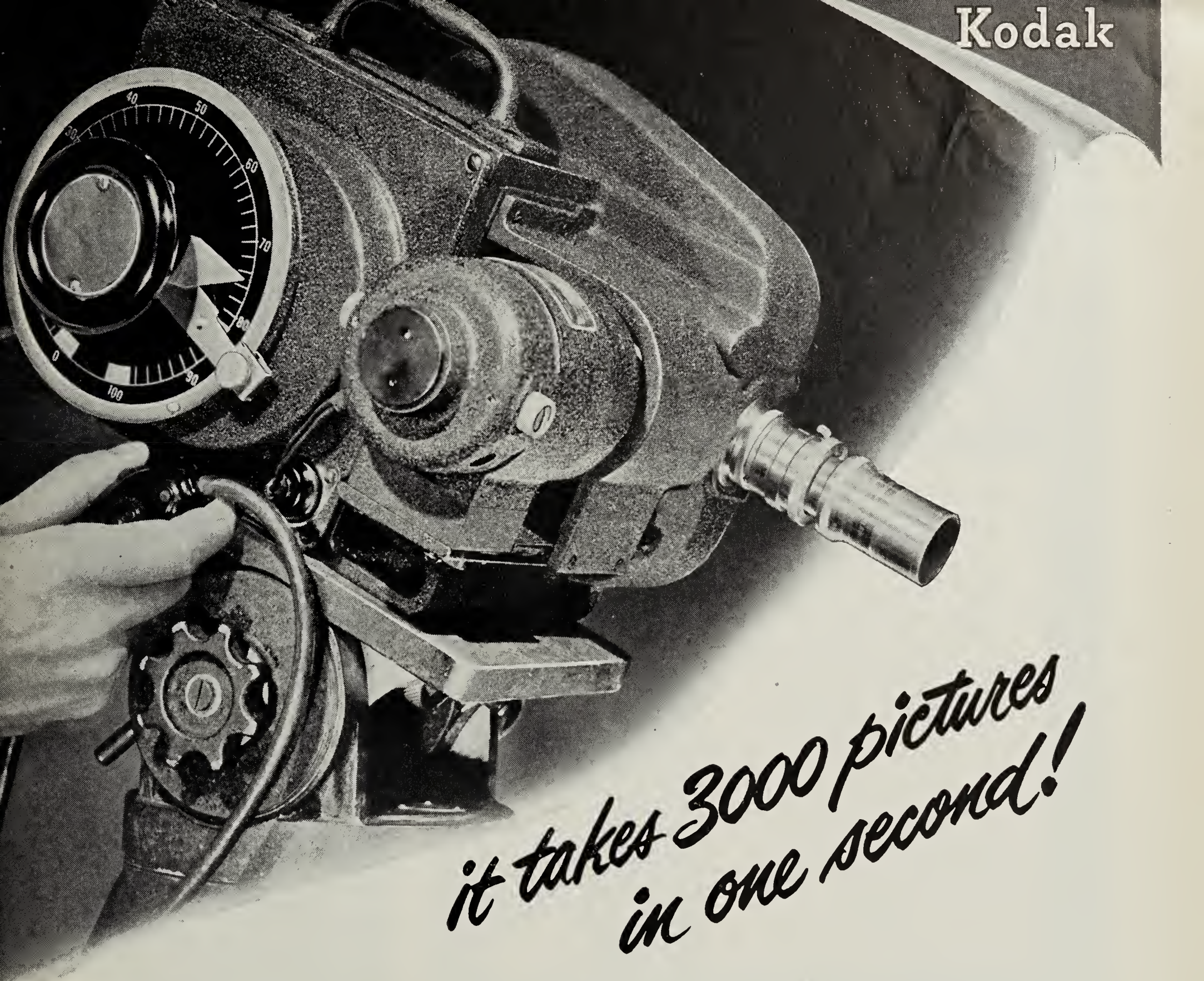
San Francisco Westwood

Executive Committee of Westwood Movie Club of San Francisco sponsored the surprise program for the September 27th meeting held in St. Francis Community Hall, with secretary Leo M. Kerkhof functioning as chairman.

Annual contest night will be held on November 29th, with prizes up for entries in both the 8 and 16mm. divisions. Westwood's School of movie instruction, which was instituted as supplemental meetings several months ago, had caught on with the general membership, and provides informative hints for movie making.

New York Eight

October 21st meeting of New York Eight MM. Motion picture Club was held in Hotel Pennsylvania, with F. B. Embshoff's "The Seasons," featured film of the evening. In addition, several subjects of members were also shown.



Kodak

*it takes 3000 pictures
in one second!*

That's why the Eastman High-Speed Camera will prove of interest to many movie makers—of great value to some

Movie makers doing advanced or specialized work—engineers, and others engaged in technical research—today have a direct approach to problems involving motion too fast for the human eye to register . . . thanks to the Eastman High-Speed Camera, Type III.

With it, they can take motion pictures at speeds adjustable from 1000 to 3000 frames a second . . . project them at 16 frames a second

High-Speed Movies

. . . another important function of photography

. . . magnify "action time" nearly 200-fold . . . see a whirl of blurred action as slow, clear, leisurely, continuous motion.

In the field of engineering, for example, you can see, study, and analyze vibration and chatter in machine elements . . . movements of fluids . . . flame phenomena . . . and many other types of motion that the eye cannot follow. Although engineering is the field in which the camera has found its widest application so far, its use could readily be extended to others.

Consider its possibilities in your own work. Perhaps many of the facts in a new, free booklet about the Eastman High-Speed Camera, Type III, will help you estimate these possibilities accurately. Address Eastman Kodak Company, Rochester 4, N. Y.

Personalized Greeting Trailers for the Holidays

by JAMES R. OSWALD

THIS year, more than ever before, the Christmas holidays are scheduled to hit a new high in the movie maker's calendar. With adequate film supplies again available to fulfill the cine fan's long-felt want, there is a great deal of lost time to be made up for, and the Yuletide season is the time to do it!

You will surely want to record, for instance, and in color, Junior's first glimpse of that shiny new, long-awaited streamlined electric train as he dashes over to the Christmas tree, and daughter's eager eyes as she first catches sight of her new bicycle, glistening under the tree lights . . . just the kind she has always wanted! Then there is Baby's overall bewilderment about the whole affair on this, a first Christmas. Oldsters, too, take part in the fun, and family reunions, merriment, and delicious delicacies for pampered appetites are the order of the day. Movie making opportunities galore present themselves from all sides throughout this festive period, and the serious cinematographer is ever on the alert for prize-winning catch-as-catch can shots, as well as routine documentary scenes which will become a part of the general movie record of the occasion, to be projected and relived a year hence, undoubtedly with the participants forming the audience at that time.

But speaking of projection, what about *this* year's show? Maybe a well informed and gracious Santa Claus will see fit to fill your Christmas stocking, figuratively speaking, with a new projector, but new projector or old, the show must go on, for surely you, as an ardent cine fan,



In making a scroll, the wording is traced on a celluloid strip, from a pattern placed in the title OVER the chosen background scene, in such a way that the scroll may be drawn steadily upward, while the background remains fixed. For backgrounds in motion, the scroll may be lettered on black paper, and double-exposed in the customary fashion over the separate background scene.

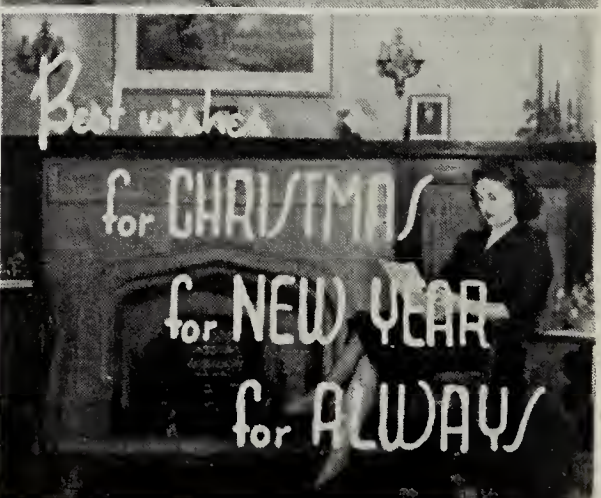
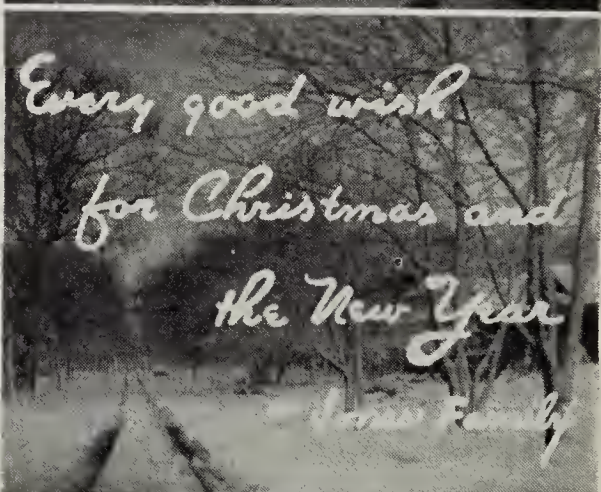
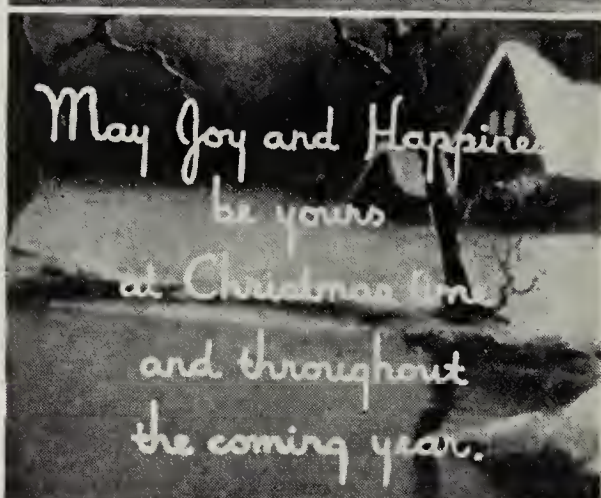
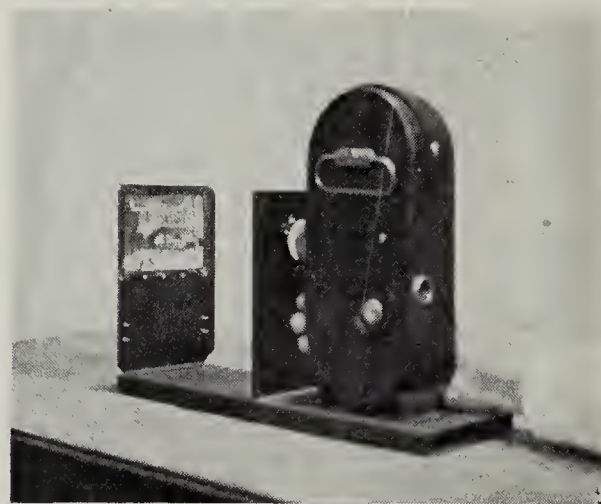
It's no trick at all to letter your own Christmas message over a favorite snapshot, using white ink, then photographing in your regular title-making equipment.

The easiest type of greeting trailer to make. Merely photograph, on-the-spot, an attractive, outdoor Christmas display, preferably after dark.

Another simple variety. Slip a conventional Christmas card into your titler, and expose in the normal manner.

More appealing. A snapshot of a familiar neighborhood street scene, lettered in white ink with the greeting, slipped in the titler, and filmed in the usual way.

Scrolls. Elaborate scrolls, in which a lengthy greeting moves continually upward as it is being read, while the background remains fixed, or in action, as the case may be, are possible by lettering the greeting on celluloid or paper strips.



cannot afford to disappoint your holiday guests by depriving them of a little movie entertainment on this joyous occasion. Even if you haven't taken any new pictures recently, there are always the old ones of a few years back which can be supplemented with some of the professionally made shorts.

Regardless, though, of how your film program shapes up, a good showman always has the welfare of his audience at heart, and every now and then takes time out to prove it by expressing his sentiments via the movie screen. Conveying Christmas messages in this unique, novel manner will not only promote a spirit of good will among your guests, but will add considerably to your reputation as a movie maker, as well.

The easiest type of greeting trailer to make is merely to photograph, on-the-spot, an attractive, outdoor Christmas display, preferably after dark. Another simple way to an attractive sentiment is to slip a conventional greeting card into your titler, and expose in the normal manner. But it's no trick at all to letter your own Christmas message in white ink over a favorite snapshot, then photographing as above. For trailers with an action background, superimpose the wording over an actual motion picture scene, first filming the action, then backwinding the film, double-exposing the title card, white lettering on black background. A "homey," indoor setting, in keeping with the season, is probably best for this type of trailer. Elaborate scrolls, in which a lengthy greeting moves continually upward as it is being read, while the background remains fixed, or in action, as the case may be, are possible by lettering the greeting on celluloid or paper strips. In making a scroll, the wording is traced on a celluloid strip, from a pattern placed underneath, after which it is arranged in the titler over the chosen background scene, in such a way that the scroll may be drawn steadily upward, while the background remains fixed. For backgrounds in motion, the scroll may be lettered on black paper, and double-exposed in the customary fashion over the separate background scene.

Personalized greeting trailers are not only fun to make, but fascinating to watch. Moreover, they may be as plain or elaborate as your artistic and technical ability allow. But always, these trailers convey your warmest Christmas sentiments. Why not surprise your audience, and include one in your holiday program this year?

Sackett Heads Defender Plant

Frederick B. Sackett has been appointed manager of the Defender plant of DuPont Photo Products Department in Rochester, succeeding L. Dudley Field who will become the department's advisor on paper products. Sackett was transferred from the DuPont Parlin plant, where he was assistant manager for the past year.

BAL TAR

152mm
f:2.7

100mm
f:2.3

75mm
f:2.3

50mm
f:2.3

40mm
f:2.3

35mm
f:2.3

30mm
f:2.3

25mm
f:2.3

... for your specialized requirement

Baltar is the Bausch & Lomb answer to the demand for a lens series of superlative performance—both for color and black-and-white—to the exacting and specialized needs of the most advanced 35mm motion picture photography. Balcote anti-reflection coated. Bausch & Lomb Optical Co., 598 Smith St., Rochester 2, N. Y.

Baltars are available through manufacturers of professional camera equipment.

BAUSCH & LOMB
ESTABLISHED 1853

New Ampro 8mm. Projector

A new 8mm. projector for home movies, claimed to achieve a new standard of quality and ease of operation for 8mm. projectors, is offered by Ampro Corporation of Chicago, a General Precision Equipment Corporation subsidiary.

Features include 500-watt illumination, still picture and reverse operation, and flickerless pictures at slow speed.

Other highlights of this Ampro model A-8 projector are: 1" F 1.6 coated objective lens, one hand precision tilting control, automatic safety shutter, rheostat control for varying film speeds, full

400 foot reel capacity if desired, efficient cooling for forward or reverse projection, automatic reel locking device. The projector operates on both AC or DC 105-125 volts, and comes complete with lens, lamp, carrying case and accessories.

La Casa, Alhambra

October 21st meeting of La Casa Movie Club of Alhambra instituted showings of series of vacation pictures made by club members. Films presented included: "Summer Wanderings," by Charles Manahan; and "Mexico" and "Appleblossom Time," by R. A. Battles.

Filmo 'Electro' Camera for Time and Motion Study

To alleviate the pent-up demand for modern industrial engineering equipment, Bell & Howell Company announces the new Filmo "Electro" magazine-loading, electrically-driven, 16mm motion picture camera, according to J. H. McNabb, B & H president. Designed especially for accurate time and motion study work, the camera is equipped with a fast 21mm F 1.9 lens (with positive viewfinder and matching objective), which affords a somewhat wider angle of view than the standard 1" lens. Other features are a dial footage indicator, accurate operating speeds of 1,000, 2,000, and 4,000 frames per minute, and a built-in 24-volt motor which assures constant filming speed at all times.

Developed by Bell & Howell in co-op-

eration with Albert Ramond & Associates, industrial engineers with headquarters in Chicago, the new instrument embodies features demanded by industry in replies to a questionnaire circulated last year by the Ramond organization.

Simplicity and efficiency of operation render the Electro especially well-suited to accurate job study, it is claimed. The magazine-loading feature facilitates film change, and enables the operator to keep individual case records separate at all times. And with the magazine and the motor functioning as a team, 50 feet of film can be run off without interruption.

Of particular interest to industrial engineers is the calibration of picture

frequency (or camera speed) in multiples of a thousand frames per minute. Thus the individual pictures, or frames, are readily translated into terms of the "therblig" (.001 minute), the standard unit of measurement in job study work.

A transformer, which is standard equipment, permits plugging the Electro into any regular house line. Or, storage batteries can be employed when a job study must be filmed in a location where the unusual sources of current are lacking, thus making the Electro completely portable. The low-voltage electrical drive is equipped with an automatic governor mechanism which, Bell & Howell engineers state, will maintain accurately the all-important motor speed despite all except the most severe fluctuations in line current.

By no means confined to use as an industrial engineering instrument, the Electro can be employed for general types of cinematography as well, wherever electric power is available, either from standard lines or a portable battery. Company recreational and promotional events, amateur and professional football and baseball games, and race-track finishes represents only a few of the many applications. For conventional use, the Electro is available with speed control calibrated in frames per second; or the motion-study speeds are readily translated into frames per second by means of a simple conversion table.

Companion-pieces for the Electro are offered by Bell & Howell in the form of a specially-designed 16mm projector and a film viewer. The projector is equipped with hand-crank (for screening one frame of film at a time); a special heat filter, which permits any single frame to be projected as a "still" with even more brilliance than is afforded when the projector is running; and a direct-reading, geared frame counter which can be reset for "clocking" any portion of a job-study film.

RCA Appoints Two

Robert H. Hunt, has been appointed regional sales manager for RCA 16mm. equipment in the Chicago area, and Elmer H. Beneke to a similar position in the Atlanta region.

Hunt will represent RCA in the twelve mid-western states, replacing H. E. Erickson, who has been promoted to Assistant Manager of the Education and Sales Department at the Camden office. Beneke is replacing M. N. Heidenreich, who has been transferred to the Dallas regional office in the same capacity.

Howard Telefilm Sales Head

George A. J. Howard, Jr., has joined Telefilm Studios as national sales manager, and goes East to supervise industrial film sales and close contracts with race tracks for Telefilm control horse race system. Howard resigned executive post with Pacific Air Lines to take the new post.



Director of Photography Stanley Cortez, A.S.C. has a specially designed light boom constructed for use in a difficult sequence for "Smash-Up," Walter Wanger production for Universal-International. Cortez is shown getting the proper lighting for a shot of Susan Hayward on the cot. Inkie spotlight is shown at top center of the picture on the end of the light boom. Via cables operated at the rear of boom, inkie can be swung in a 340 degree circle for difficult shots as shown.



Will you shoot the turkey?

CONSIDERING some indoor shooting of the family turkey dinner this holiday season?

Then be sure your movie camera is loaded with Ansco Triple S Pan Film.

It's fast!

It captures deep-down shadow detail at practical lighting levels. It helps you get scenes of "professional" brilliance.

Triple S Pan's great speed lets you stop down when great depth of field is needed.

You'll keep the entire scene in sharp focus—very important when the enlarged images are viewed on the screen.

And Ansco Triple S Pan Film has a long scale of gradation . . . from twinkling highlights . . . to soft shadows. Try it. You'll see a noticeable improvement in your pictures. **Ansco, Binghamton, New York.** A Division of General Aniline & Film Corporation. General Sales Offices, 11 West 42nd Street, New York 18, New York.

ASK FOR

Ansco

8 and 16mm

TRIPLE S PAN FILM

S.M.P.E. Convention

(Continued from Page 396)

the SMPE for presentation to the individual or film company for the most outstanding contribution to the advancement of the technical or engineering art of motion pictures. It was also voted that the Society establish student chapters in universities and colleges where there is sufficient interest for such organizations.

Price Welcomes SMPE

Byron Price, board chairman of the Association of Motion Picture Producers, was guest speaker of the opening luncheon which launched the convention. After recalling the early novelty of films, he stated, "If sound and color and other mechanical improvements had never been attained, the motion picture never would have survived except as a small sideshow of American life.

"Nor could the motion picture of the present day, with all its miraculous qualities, expect to survive if research simply stands on its hands, surrendering to smugness and dreaming that perfection had been attained. The effective capture of the third dimension alone provides a goal worthy of the endeavor of the best minds among you."

Mr. Price also disclosed that the major film companies already had preparations underway for a long-range and expanded research program, and general industry support is already assured for the project.

Pertinent Papers

"Studio Production with Two-Color Bi-Pack Motion Picture Film," by John Boyle, A.S.C., and Benjamin Berg of Hal Roach Studios. The increased use of color in motion pictures has brought about a revival of the use of two color bi-pack processes. Although it has definite limitations in color range in comparison to the three color method, careful studies

and tests have enabled production of two color feature productions to an acceptable degree. With proper handling, allowance for sufficient production time, and close coordination between camera, makeup, art and wardrobe departments, the results secured on several features at Hal Roach studios are very adequate.

The entire production program of the Hal Roach Studios is in the two color process. With the entire product of the studio in color the technical departments have had the advantage of planning for the limitations of a two color system. This has enabled the studio to obtain the maximum possible from such a process.

A decided advantage for the Director of Photography has been the use of hard light and exterior type bi-pack film. This has not previously been a general practice with two color systems because of budget limitations. The paper detailed lighting techniques, makeup, set decoration, wardrobe, camera and other practices as devised after production of the Roach features made to date.

"Application of a New One Strip Color Separation Film in Motion Picture Production," by H. C. Harsh and J. S. Friedman of Ansco, Binghamton, N. Y. Paper described procedures to be used with the new Ansco type 155—which is designed for making color separation negatives. Equal gammas are obtained for the red, green and blue filter exposures with the same developing time, making it possible to obtain the black-and-white separations as successive frames on a single strip of film and thus obviate much of the difficulty of registration. By varying the developing time or developer formula, it is possible to change the gamma over a range of 0.5 to 3.0 to suite the purpose for which the separations are intended, while still maintaining equal graduations for the different filter exposures.

"The Physical Properties and Practical Application of the Zoomar Lens,"

by Frank G. Back of Research & Development Laboratory, New York. The Zoomar lens is a varifocal objective for motion picture cameras which achieves the change of focus by the linear movement of a single barrel (in which all the movable elements of the system are rigidly mounted.) The new feature of this lens consists in the principle of changing the focal length of the system by one group of lens components without consideration of the displacement of the image plane, while a second lens component, rigidly coupled to the first one by the common barrel, compensates for this displacement.

In correcting this system for the optical aberration, it has been discovered that the Deidel equations and the other formulae of the third order theory commonly used in preliminary lens design broke down entirely and new ways of corrections had to be devised.

The Zoomar lens not only makes it possible for the cameraman to take zoom shots on occasion where it was heretofore impossible due to the complicated preparations necessary for such shots, but it also opened the field for entirely new effects which could not be previously achieved.

Magnetic recording of sound came in for several papers on various aspects and developments of this medium, with indications that eventually such sound recording will be perfected for use on motion picture film, with chances that its economy features will be of especial interest to the amateur movie maker.

"Special Cameras and Flash Lamps for High-Speed Underwater Photography," by Robert T. Knapp, California Institute of Technology, Pasadena, Calif. The equipment described was developed for analyzing underwater motion of solid bodies. These studies are being carried out in a special tank, 30 feet long and 13 feet in diameter in the Hydrodynamics laboratory at Caltech. It operates with a water depth of about 10 feet. The experimental needs demand a high rate of picture taking, also that the object studied should be in the field of at least two cameras at all times. To meet speed requirements, the equipment is developed around Edgerton type flash lamps instead of a shutter mechanism. Special magazines have been designed using an endless film belt of sufficient length for a one second exposure time. Underwater coverage is obtained by a battery of five cameras operated from a single drive shaft. They are mounted with each lens at the center of curvature of a spherical window. A film speed of approximately 35 feet per second is used. A black background in the tank permits overlapping exposures. Illumination is furnished by a battery of 30 synchronized flash lamps operating at rates up to 3,000 per second.

16 mm. Subjects

At the special session on 16 mm., highlights were paper and exhibit of the new Mitchell 16 Professional camera (de-

(Continued on Page 422)



Byron Price, board chairman of Association of Motion Picture Producers, predicts vastly increased engineering research program for the film industry to assure continuance of motion picture as a major public entertainment medium. Left to right: Joyce Reynolds, Warner player, President Don Hyndman; Price, and Nathan Golden.



JULES E. BRULATOUR, A. S. C.

THE motion picture industry lost one of its most enthusiastic and progressive leaders with the passing of Jules E. Brulatour at Mt. Sinai hospital, New York, on October 26th, after an illness of several weeks.

Pioneer in the sale and distribution of photographic supplies and products, Brulatour early had the vision and foresight to evaluate the tremendous potentialities of motion pictures as an entertainment medium for the world. And through the years, he was always in the forefront in pressing for introduction of new practices, and the constant improvement in the quality of motion picture productions.

As exclusive distributor of Eastman unexposed motion picture films since 1912, he has continually provided advice and counsel to producers and distributors, and numerous instances of his extension of financial aid to companies to assist the latter over tough hurdles, are well known within the trade.

His most friendly relationship with the motion picture cameramen from virtually the inception of the business, and his later personal campaign to raise the status and importance of the photographer in the eyes of the producer, can never be forgotten.

Arriving in New York in 1898, Mr. Brulatour shortly thereafter became sales manager for Lumiere of Paris, which at that time was manufacturing various photographic materials, including motion picture film. Even at that time, when moving pictures were novelties exhibited in tent shows and nickleodeons, he had unbounding confidence that here was the future mass entertainment medium, and he soon became an expert of the industry. It was this unbounding confidence and intimate industry knowledge that had the late George Eastman seek him out to take over American distribution of Eastman motion picture film; an association which has existed for 35 years.

Mr. Brulatour was born in New Orleans and educated at Tulane University. In the early years of the film industry, he was president of Motion Picture Sales Company, a group of independent producers; and shortly thereafter an organizer and first president of Universal Film Company. When features were replacing the one and two reel shorts, he organized and built the Paragon and Peerless studios at Fort Lee, and was an original organizer of the old World Film Company; in addition to several laboratories. In later years, he was a member of the Paramount Pictures Corporation board of directors. He also was widely connected in banking circles, and was closely interested in philanthropic activities, particularly those relating to the motion picture industry. For efforts during World War I, he was awarded the Ribbon of the French Legion of Honor.

He is survived by his wife, Hope Hampton Brulatour, screen, stage and opera star; also three children by previous marriage, and nine grandchildren.

The American Society of Cinematographers sincerely regrets the passing of Jules E. Brulatour, one of the great men of the motion picture industry, and for many years an Honorary Member of the A. S. C.

Aces of the Camera

(Continued from Page 395)

demic had launched Charlie Boyle on a successful career.

His first impressions of the picture business are, perhaps, best recorded in a poem he wrote after several excursions patterned after the Lone Pine trip:

When I got out of the army
I looked for something to do;
I came to California
And joined a movie crew.
But the job is just like the army,
We don't get very much dough,
But we see a lot of the country
And they feed us wherever we go.

One of his most interesting experiences, in a career comfortably larded with interesting experiences, was the year he spent in the Philippine Islands. Hired as a cameraman by the Philippine Film Productions, a pioneer company in the islands, Charlie found himself, through force of circumstances, a producer as well. He arrived to find plenty of help, but no organization; willing workers but completely ignorant of the jobs they had to do. So Charlie took one boy and told him he was a 'grip,' and he explained what a grip had to do. To another he explained the duties of a propman. And so on through the whole complement of the production crafts. The boys were very proud of the titles he gave them, and for those whose jobs had no title he had to invent one. Under these conditions he photographed, and guided the destinies of nine pictures during the year of his stay.

In order to give you an idea of what the Philipinos thought of Charlie, and at the same time to convey some of the idiomatic quaintness that creeps into their expressions, we quote from an article published in the Manila "Herald Mid-Week Magazine" for August 21, 1935:

"Usually, it is about the stars that we read. Seldom do we read about the men behind the scenes, the tireless workers who turn the magic of the make-believe world into superb entertainment for us of the twentieth century. In Hollywood, as well as in the Philippines, the men behind the scenes are seldom brought to the limelight. And yet, they perform as important a part, if not a more important part, than the stars in the making of pictures.

"Last week, during the preview of 'Himala ni Bathala,' the newspapermen were unanimous in remarking: what a masterpiece of photography! Truly, they said, Filipino pictures have arrived. And they asked who the photographer was. And the answer was: Charles P. Boyle, A. S. C., studio manager of the Philippine Films Productions, pioneer makers of talking pictures in this country.

"Boyle, or Charlie for short, arrived here unheralded last May 7th. Of a naturally quiet disposition, he never bragged about himself. He moved about

unobtrusively, smiling only now and then in answer to greeting from persons who know him, and always tight as a clam.

"But when people began talking about the remarkable photography of 'Himala ni Bathala,' Boyle, upon the insistence of newspapermen, broke his silence. And to us revealed something that even dazzles us more than many stars of the shadowworld."

This laudatory account goes on and on to fill almost an entire page of the periodical, with pictures of Charlie reading a script, and another with him looking very authoritative next to a camera. It praises him personally and professionally, and by implication compares him to a composite of all the great names in the Hollywoods. But it failed to tell what it was that Charlie revealed when, 'at the insistence of newspapermen' he 'broke his silence' and 'dazzled them even more than many stars of the shadowworld.' And Charlie quite obviously took no offence at being labeled 'tight as a clam,' because he has preserved the article for posterity.

The Philipinos take their movies, and their movie industry, very seriously. In their pictures they indulge themselves to the full extent of the emotions and go into tremendous and lengthy detail in the telling of their stories so that the feature pictures run eleven reels and more in length. The dialogue is usually in the Tagalog dialect, and the stories generally concern themselves with events and themes that are most suitably interpreted by Philipinos and which can best take advantage of the native scenery.

One exception to this was the Philippine Films production of "The Miracle Man," which Charlie photographed. And he recalls that the Philipino actors, with their predilection for the broader type of emotional acting, had a field day with this vehicle.

When the production was previewed in Manila, Charlie noticed a large crowd gathered; not at the theatre, but about half a block away. And because the crowd kept getting bigger and bigger until it swelled way over the sidewalk, he felt he had to see what it was all about. When he had elbowed his way to a point of vantage he found the actor who had played the part that Lon Chaney made famous in the American production telling his eager and serious listeners how he had done it. Then he would illustrate a point by grimacing and contorting himself until he out-Chaneyed Chaney. Awed and spellbound, the crowd urged the actor to retell the story; which he did. And as those in the rear of the crowd surged forward he was again requested to repeat the performance. As Charlie emerged from a throng of real film fans he wondered if a similar idea wouldn't be a big attraction for Sid Grauman.

It was on this trip to Manila that Charlie met and married his wife. So

proud was she of her husband's professional skill in the realm of color that she could not be satisfied to cable her family that she had married a cameraman, she had to tell them she had married a 'color cameraman'; thereby causing considerable consternation until the folks had an opportunity to gaze on Charlie's purely Celtic physiognomy.

In 1937 Technicolor put Charlie under contract to train studio cameramen in the use of Technicolor cameras and film. He is still with that company and on assignment to major producers has contributed his talents to such outstanding pictures as "Jesse James," "Maryland," "Kentucky," "Buffalo Bill," "Northwest Passage," "Billy the Kid," and "Canyon Passage." In 1945, with Robert Planck, A. S. C., he was nominated for the color photography award for "Anchors Aweigh."

This year he has been assigned to "Duel in the Sun," and is currently shooting tests for Selznick's forthcoming production for Vanguard, "Little Women."

Some of the most beautiful color photography that Charlie has ever turned in however, is, oddly enough, to be seen in a commercially sponsored picture entitled "Men Make Steel." This is a four reel picture made in 1938 for the U. S. Steel Corporation. Shot on Technicolor 3-strip, which was then only half as fast as it is today, and with only 1,500 amps to call upon to light his sometimes immense sets, Charlie achieved some of the most awe-inspiring, thrilling beautiful photography which has at the same time captured and graphically reflected the spirit and feeling of the subject. Here is a picture that from a photographic standpoint definitely deserves a place in somebody's archives. And it's a wonderful illustration of what a good man can do with a camera.

New B & M Accessories

With the development of fast photographic films, the control of light has become a real problem for the photographer. Light must be confined to definite areas and directed only where needed.

Bardwell & McAlister, Inc., of Hollywood, pioneers in photographic lighting equipment, manufacture a whole line of special accessories for this purpose. These practical working tools have been developed for use by motion picture and portrait photographers whose work requires quick and accurate means of controlling light for high quality results.

These accessories are for use with the famous B & M Spot Lights which range from the "Dinky Inkie" at 150 watts to the 5000 watt "Senior Spot." They include snoots, diffusers, barn doors and the B & M "Foco Spot" which not only concentrates light, but will even confine the spot to a variety of special shapes such as circles, squares, oblongs, etc.

New Maurer 16

(Continued from Page 402)

more convenient method of focusing.

The standard gear-driven feed and take-up film magazines manufactured for Maurer equipment in the past will be used on the new Maurer Camera. 400-foot capacity film magazines will be standard, but 200-foot capacity and 1200-foot capacity film magazines will be made available. The 400-foot magazines take either 400-foot darkroom loading film on cores, or 100-foot and 200-foot daylight loading spools.

The new Maurer Camera is extremely quiet in operation. The camera gears run in a sealed chamber of grease, deadening most of the noise usually associated with camera operation. The camera motor is held in position on the righthand side of the camera by two mounting screws and is easily detached. Synchronous motors are supplied as standard equipment on all Maurer Cameras, although other motors are available. The camera with finder, motor and film magazine weighs only 28 pounds. Designed as the ideal camera for studio use, the Maurer Camera, because of the means provided for interchanging accessory equipment, can be used on location where space and weight

requirements become important considerations. A spring drive will be made available for use on the Maurer Camera. This drive will operate the Maurer Camera over a speed range of 8 f.p.s. to 64 f.p.s. The spring drive will eliminate the need for an electric power source in field work, as well as providing a method of operating the camera at other than 24 f.p.s. Equipped with a 200-foot film magazine and a spring drive the Maurer Camera can be taken into tight places where space limitations would make impossible photographing with larger equipment.

Professional equipment is a "must" for professional production. The new Maurer Camera will go a long way toward improving the quality of 16-mm cinematography, and enable the industry to realize its full potential.

Bell & Howell Official Passes

Eric F. Carlson, widely known official with Bell & Howell for 18 years, died suddenly in Los Angeles on October 19th of a heart attack. He joined BH in 1928, and after a year at the Chicago headquarters served as eastern division sales manager in New York for a brief period, before taking over the post of western division sales manager at Hollywood in 1930.

New Filmosound Releases

The following current 16mm. film releases are available from the Bell & Howell filmsound library:

THE LIFE CYCLE OF A PLANT—10 min.

A general study of a plant, in this case the Lupin, from seed to seed, including the processes of pollination and fertilization. College and senior high school. Produced by G. B. Instructional, Ltd., distributed by Bell & Howard.

BREATHING—10 min.

Some experiments in the chemical process of burning and oxygenation and illustrates by growing plants that oxygen is essential for life. Various methods of recording the inhalation and exhalation of breath are explained by moving diagrams. College and senior high school. Produced by G. B. Instructional, Ltd., distributed by Bell & Howell.

Recreational

FRISCO SAL (Universal)—7 reels

Sheltered Eastern girl seeks her brother on Barbary Coast, becomes a singer and reconciles and reforms deadly former enemies. (Susanna Foster, Turhan Bey, Alan Curtis, Andy Devine). Available from August 23, 1946, for approved non-theatrical audiences.



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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1879

Of THE AMERICAN CINEMATOGRAPHER published Monthly at Los Angeles, California for October 1, 1946.

State of California } ss.
County of Los Angeles }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Walter R. Greene, who, having been duly sworn according to law, deposes and says that he is the Editor of the AMERICAN CINEMATOGRAPHER and that the following is, to be best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, A.S.C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif.; Editor, Walter R. Greene, 1782 N. Orange Dr., Hollywood 28, Calif.; Managing Editor, Walter R. Greene, 1782 N. Orange Dr., Hollywood 28, Calif.; Business Managers, Marguerite Duerr, 1782 N. Orange Dr., Hollywood 28, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) A.S.C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif., wholly owned by the American Society of Cinematographers, Inc., a non-profit corporation whose address is 1782 N. Orange Dr., Hollywood 28, Calif. Officers of the American Society of Cinematographers, Inc. are: President, Leonard Smith, Hollywood 28, Calif.; 1st Vice President, Leon Shamroy, Hollywood 28, Calif.; 2nd Vice President, Charles Rosher, Hollywood 28, Calif.; 3rd Vice President, Charles G. Clarke, Hollywood 28, Calif.; Secretary, Ray Rennahan, Hollywood 28, Calif.; Executive Vice President and Treasurer, Fred W. Jackman, Hollywood 28, Calif.; Sergeant-at-Arms, John W. Boyle, Hollywood 28, Calif.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceeding the date shown above is—(This information is required from publishers of daily, weekly, semi-weekly and triweekly publications only.)

WALTER R. GREENE
Editor

Sworn to and subscribed before me this 12th day of October, 1946.

(Seal) Franklin H. Mills
Notary Public

(My commission expires July 3, 1949).

Acme Opens 16mm. Lab In Hollywood

Headed by executives and technicians with long experience in professional motion picture processing, Acme Film Laboratories, Inc., is opening a new and completely modern plant at 1161 North Highland Ave., Hollywood, to provide quality laboratories services to producers of 16 mm. films.

Gerson (Gus) Barth, as president, will handle sales and promotion. He has been closely associated with laboratories and films sales for the past 30 years both in New York and Hollywood, and leaves a long association with Ansco on the coast for the new enterprise.

Wilson Leahy, A.S.C., functions as vice president in charge of production. With background of 27 years experience in Hollywood studio and commercial laboratories, he was associated for more than 10 years with the technical motion picture department of Ansco—which he headed for three years prior to accepting a commission in the Navy in 1941. In service, Leahy was Division Officer in charge of motion picture processing at the U. S. Photo Science Laboratory at Anacostia, D. C.

Robert M. Grubel joins Acme as supervisor and chief engineer, and has had 10 years experience in color processing practices. During the war Grubel spent four years as a Photo Officer, and following return from overseas, was assigned photographic testing and research at the Proving Ground Command. In assembling its laboratory staff, Acme is engaging technicians with experience in the professional processing field.

Latest Equipment

Latest equipment installed in the new building embracing 18,000 square feet includes: bottom drive, lateral shaft vertical type developing machines for most efficient operation; non-slip 16 mm. sound printers; automatic continuous color printers capable of color correc-

tion on individual scenes in cut originals for release printing; and dummy sound heads in projection rooms to allow for separate sound and picture projection.

Service delivered by the developing machines will include black-and-white reversal, in addition to standard release and daily prints, and fine grain long gradation negatives. Sound prints will also achieve maximum fidelity resulting from non-slip printing and optimum development. The 16 mm. color reproduction facilities will include both standard and low gradation type Kodachrome originals, with balancing of individual scenes.

Process and Sound Available

Complete service of optical process and special effects, and sound recording facilities, will be available in the Acme building. These separate departments will be operated by engineers and technicians who have handled the same type of work in the major studios for 35 mm. productions. A sound stage ample for dubbing, orchestration and production purposes, and fully equipped cutting rooms, are also available under the one roof.

In establishing Acme Laboratories, Barth and Leahy foresee greatly expanding activities in commercial and industrial 16 mm. production, and feel that this branch of the industry deserves availability of the same precision methods of processing and related factors as are current for the high quality negatives and prints turned out by the major producers in Hollywood.

October Cover Credit

G. R. Ritchie photographed the still on the set of "Unconquered," which was our cover picture for the October issue. Credit for this fine shot was inadvertently omitted from the caption.

New! TELEFILM'S "Lok-On" Flange



Used by Leading Hollywood 16mm Editors and Producers for Editing and Re-winding

It's Telefilm's latest 16mm. time saver! Sides are of heavy gauge clear plastic. Engraved footage scale on inside surface shows amount of film on spool. One side removable--so you save time by slipping on film without winding. Nothing ever like it for winding short lengths of film into coils quickly, without endangering emulsion surfaces. Outer side has specially-made locking device, allowing removal of film by means of a simple lock. Core takes standard lab pack spools, fits a standard 16 or 35 mm. rewind.

TRY IT 10 DAYS - MONEY BACK!

May be purchased complete, 8 inch size \$17.50 or 9 1/2 inch size \$18.50, or the face side with spool may be purchased separately at half above prices. Immediate delivery. Use it 10 days then money back if not delighted.

TELEFILM INC.

HOLLYWOOD 16mm HEADQUARTERS

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Kodachrome Introduced Commercial Type 16mm.

EASTMAN Kodak is immediately introducing a new type (5262) commercial 16 mm. Kodachrome film, designed to provide a low contrast color original from which a color release print (or prints) of good quality can be made on Kodachrome duplicating film.

Company announcement states: "Kodachrome commercial film is color balanced for a color temperature of 3200° K. Mazda 3200° K lamps are recommended. This film can also be used in daylight with the newly introduced Wratten filter No. 83, and with photoflood and Mazda C. P. lamps with the Kodak CC14 filter.

"In order to obtain the most uniform quality from one emulsion to the next, emulsion filters of the Kodak CC Filter Series may be necessary in some cases. Information printed on the film carton specifies the required filter, if any. If a combination of two emulsion filters is required and if photoflood lamps are used, then the Kodak CC13 rather than the CC14 filter should be used.

"The same exposure recommendations are made for this film as for Kodachrome Film, Type A. Exposure indexes and exposure tables are given in the data sheet provided. Exposure latitude of Kodachrome commercial film is somewhat greater than that of Type A film, and the contrast is lower. The extra exposure latitude insures proper gradation of highlights and shadows and should not be used to absorb avoidable exposure errors. The exposure and subject contrast should be adjusted to give highlight densities not less than 0.45 to 0.50, and shadow densities not greater than 1.8 to 2.0. Such highlights and shadow densities are not appropriate to good projection; but a duplicate from such a film has lighter highlights, higher contrast, and projects well.

"Since variations in over-all color rendition may be increased slightly on duplication, it is well to avoid slight roll-to-roll variations. For this reason, all the film for the production at hand should have the same emulsion number and should be obtained at the same time. If exposed rolls must be held several weeks or longer, they should be protected from high humidity, and in hot weather should be refrigerated. Films should never be stored in automobiles.

"The low contrast original on Kodachrome commercial film is not intended for projection. Its contrast is purposely low so that the contrast obtainable in its duplicate is comparable with the contrast of a good original made on Kodachrome type A. The original may also show a color cast, i.e., its rendering of neutral colors may depart from neutral. This is done purposely in the interest of making good duplicates. Therefore, the color quality of the original should be judged from its color duplicate. With experience, it may be possible to judge an original for color quality. Kodachrome commercial film requires special processing, and should be returned—either in the original carton or otherwise packed and clearly identified as commercial film type. Kodak processing stations at Rochester, Chicago, Los Angeles, and Flushing, N. Y. are equipped to handle this film. At the present time, only the Rochester laboratories are equipped to furnish daily print service in supplying duplicates from this film."

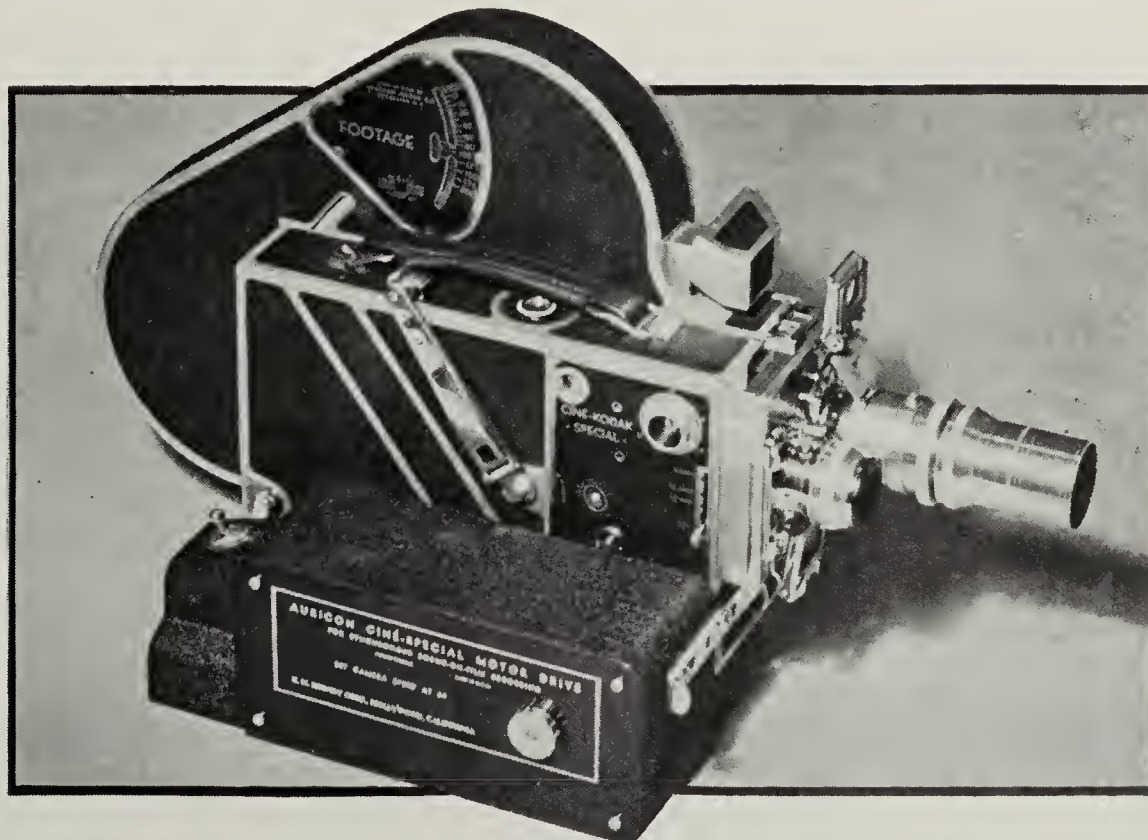
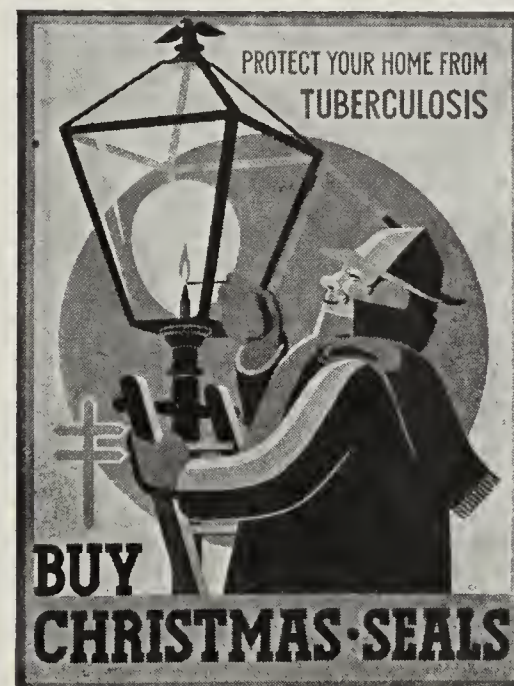
chrome type A. The original may also show a color cast, i.e., its rendering of neutral colors may depart from neutral. This is done purposely in the interest of making good duplicates. Therefore, the color quality of the original should be judged from its color duplicate. With experience, it may be possible to judge an original for color quality. Kodachrome commercial film requires special processing, and should be returned—either in the original carton or otherwise packed and clearly identified as commercial film type. Kodak processing stations at Rochester, Chicago, Los Angeles, and Flushing, N. Y. are equipped to handle this film. At the present time, only the Rochester laboratories are equipped to furnish daily print service in supplying duplicates from this film."

Lens Deal for Sweden

Bausch & Lomb Optical Company has joined with Aga-Baltic Ab of Sweden in formation of Aga-Bausch & Lamb Ab for distribution of B&L scientific and optical lenses and instruments in Sweden and Finland.

Victor in British Tie-Up

The Victor Animatograph line of motion picture projectors and sound equipment will be manufactured in England by Salford Electrical Instruments, Ltd. of Manchester according to deal recently negotiated by the two companies. Salford will follow the quality specifications and standards of Victor in turning out projectors and accessories for sale and distribution in Europe and Africa.



AURICON CINE-SPECIAL MOTOR DRIVE

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AC-11



Executives of Victor Animatograph Corporation and some of its distributors who attended recent sales conference in Chicago.

ASC Resumes Technical Meetings

American Society of Cinematographers resumed its regular monthly technical meetings at the Hollywood clubhouse on October 28th, with program lined up by Charles Clarke, A. S. C., and John Boyle, A. S. C., comprising an excellent selection of papers and demonstrations. Because of requirement of wartime secrecy and other factors, the technical sessions had to be suspended for the past several years. Meetings will be arranged for the first Monday of each month henceforth. A large turnout of members and guests greeted the initial session, which was chairmaned by Charles Clarke.

Dr. W. B. Rayton, A. S. C., of Bausch & Lomb Optical Co., Rochester, gave a most informative talk on coated lenses as applied to motion picture photography. A large selection of slides illustrated the paper. A demonstration film of the Zoomar lens was exhibited, and H. T. Souther followed with a slide-illustrated paper on "Composition in Motion Pictures." John A. Maurer then gave a brief talk on the new Maurer professional 16 mm. motion picture camera, and had one of the latter on display for the members to look over following the meeting's close.

Through the courtesy of W. D. Buckingham of Western Union Electronics

Division, equipment was loaned to briefly demonstrate the new concentrated-arc lamp developed by WU research laboratories; and general consensus was that the lamp could be utilized for obtaining special and unusual lighting effects in professional motion picture photography.

It was fortunate that the initial ASC technical meeting followed the close of the SMPE convention, which allowed for the appearance of Dr. Rayton and Mr. Maurer on the program.

S.M.P.E. Convention

(Continued from Page 416)

scribed in American Cinematographer, October, 1946) and "A New Series of Camera Lenses for 16 mm. Cinematography," by W. B. Rayton of Bausch & Lomb Optical Co., Rochester, N. Y. The latter highly informative technical paper will be republished as soon as it is available. Allen Jacobs of Calvin Company, Kansas City, delivered a paper on the past lack of adequate equipment for the making of sound on 16 mm., which is becoming more important with the wider use of 16 mm. for commercial and industrial firms. R. H. Talbot of Eastman Kodak presented an informative paper on "A Method for Determining the Shape of the Focal Surface in 16 mm. Projection."

Wider Film Uses

From the wide variety of papers presented at the convention, the professional and amateur film producer and enthusiasts will shortly have many new and startling methods, tools and advance designed equipment to greatly enhance the technical qualities of motion pictures.

In addition, general consensus indicates the growing spread of motion pictures into wide fields of heretofore unthought of activities and functions.

(Editor's Note: Virtually the complete list of papers as presented appeared in last month's issue of American Cinematographer.)

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Cinema Workshop

(Continued from Page 404)

shouting at your players, as that is the surest way to jolt them out of the mood.

The cameraman has *slated* the scene, and now you call for a *take*. The lights are brought up to full illumination for the scene. The actors take their places. Your assistant will shout "Quiet," several times (not to provide atmosphere, but to be sure no extraneous sounds are picked up by the microphone). You alert your actors with a ready-cue, then say "Camera!" to the operator. The camera starts rolling, and there is an interval of a few seconds before the sound apparatus reaches full recording speed. When it does, the sound man will say: "Speed!" You will then say: "Action!" to your actors, and they will begin acting out the scene.

While the scene is being shot, you carefully watch the action, notice the way the dialogue is delivered, and check for pace and tempo. When the scene has run its course, you say "Cut" and the action ceases. You then ask the cameraman if the take was all right for the camera. If, by some miracle, the first take was perfect, you tell the script clerk to "Print that one," and she will make a note of it to be referred to when the film is processed.

If, however (as is usually the case), something is not quite right in the way the scene was executed, you will briefly discuss the shortcoming with the person responsible and then call for another take. The scene is repeated (depending upon the latitude of the budget, of course), until you and the cameraman are both satisfied that it is as near perfect as any scene will ever be. You both proceed to the next scene indicated on the shooting schedule.

The Summing Up

As the above production outline implies, smooth functioning on the set depends upon two things: pre-planning and close co-operation between cast and crew. Pre-planning means that the director and his technicians have taken the time to foresee all eventualities that might develop, and have planned accordingly. In this way, there is little waste of time, money, and effort.

The importance of co-operation cannot be over-emphasized. If the personnel working on the picture will all pull together and work in harmony for the good of the film, if they are big enough to place the picture's success ahead of personal ego—then the results are bound to show up favorably on the screen.

Another good rule (paraphrasing the Boy Scout motto) is: "Be Prepared for Anything." Arrange your schedule so that if any unexpected hold-up occurs, you can "shoot around" it. Always have on the set a kit containing such things as thread, pins, nails, tape, paper, pencils, glue, aspirin tablets, razor blades, etc. You never can tell when one of

these small items will save the day on the set.

The specific problems of outdoor shooting and location trips include transportation, waiting for sunlight, and provisions for the meals and the physical comfort of the personnel. If these factors are well thought out in advance, shooting is sure to proceed much more smoothly.

Having detailed on-the-set procedure, we are now ready to go on to our next important phase of production.

NEXT ISSUE: *Exterior Shooting.*

Ansco Expands Research

Expansion of the general research department of Ansco results in promotions and additions to the staff. Dr. Herman Hoerlin heads the newly-created post of manager of physics research laboratory, while Dr. Frank J. Kaszuba becomes manager of the chemistry research laboratory. Another new classification is added with the promotion of Dr. Gustav A. Wieseahn and Ronald H. Bingham to function as research specialists.

Dr. William L. Wasley, formerly assistant professor of chemistry at Washington University, St. Louis, joins the research staff in capacity of a research group leader. Simultaneously, Dr. Benjamin R. Harriman, Dr. Thomas R. Thompson, and Monroe H. Sweet are promoted to ranks of research group leaders.



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Current Assignments of A.S.C. Members

As this issue of American Cinematographer goes to press, members of the A.S.C. were engaged as Directors of Photography in the Hollywood studios as follows:

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Single lens F2.5 models, model K's, compact turret, model Q focusing, 3 lenses, motor, positive finders, 400 foot magazines, tripod, case. Stock of fast Astro and Meyer lenses, 25mm. to 12". Eyemax 6" F4.5 lenses, \$64.50 each. Arriflex 200 foot motor driven 35mm. camera, tachometer, Hi-Hat, 12 volt lightweight plastic battery, case with fittings, tripod complete. Choice of fast Astro, Meyer, Sonnar and Biotar coated lenses.

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Burnett Guffey, "They Walk Alone," with Glenn Ford, Janis Carter, Edgar Buchanan, Barry Sullivan, Karen Morley.

Fred Jackman, Jr., "Twin Sombremos" (Cinecolor), with Randolph Scott, Barbara Britton, Bruce Cabot, Grant Withers.

Charles Lawton, Jr., "The Lady From Shanghai," with Rita Hayworth, Orson Welles, Glenn Anders.

George Meehan, "Millie's Daughter," with Gladys George, Gay Nelson.

Enterprise

Russell Metty, "Arch of Triumph," with Ingrid Bergman, Charles Boyer, Ruth Warrick, Michael Chekhov.

Victor Milner, "The Other Love," with Barbara Stanwyck, David Niven, Robert Stack.

Metro-Goldwyn-Mayer

Robert Surtees, "Unfinished Dance" (Technicolor), with Margaret O'Brien, Cyd Charisse, Danny Thomas.

Hal Rosson, "To Kiss and Keep," with Gene Kelly, Marie McDonald, Charles Winninger, Spring Byington.

Robert Planck, "It Happened in Brooklyn," with Frank Sinatra, Kathryn Grayson, Peter Lawford, Jimmy Durante.

Sidney Wagner, "The Romance of Rosy Ridge," with Van Johnson, Thomas Mitchell, Marshall Thompson, Guy Kibbe.

George Folsey, "Green Dolphin Street," with Lana Turner, Van Heflin, Donna Reed, Edmund Gwenn, Reginald Owen.

Charles Rosher, "The Personal Touch," with Lionel Barrymore, Edward Arnold, Lucille Bremer, James Craig, Keye Luke.

Charles Salerno, "Undercover Maisie," with Ann Sothorn, Barry Nelson, Mark Daniels.

Paramount

Ray Rennahan, "Unconquered" (Technicolor), with Gary Cooper, Paulette Goddard, Howard daSilva, Cecil Kellaway, Ward Bond, Katherine DeMille, Boris Karloff.

Charles Lang, "Desert Town" (Hal Wallis Prod.) (Technicolor), with John Hodiak, Elizabeth Scott, Burt Lancaster, Mary Astor.

John Seitz, "The Big Haircut," with Alan Ladd, Dorothy Lamour, Robert Preston, Lloyd Nolan.

Lionel Linden, "Variety Girl," with Mary Hatcher, Olga San Juan, DeForest Kelley.

PRC

Virgil Miller, "Red Stallion," with Robert Paige, Noreen Nash.

RKO

Sol Polito, "A Time to Kill" (Hakim-Litvak Prod.), with Henry Fonda, Barbara Bel Geddes, Vincent Price, Ann Dvorak.

Archie Stout, "Tarzan and the Huntress" (Sol Lesser Prod.), with Johnny

Weismuller, Brenda Joyce, John Sheffield, Patricia Morison.

Jack Mackenzie, "Thunder Mountain," with Tim Holt, Richard Martin, Martha Hyer.

Republic

Tony Gaudio, "Gallant Man," with Don Ameche, Catherine McLeod, Rosco Karns.

20th Century-Fox

Norbert Brodine, "Boomerang," with Dana Andrews, Frank Latimore, Jane Wyatt, Lee J. Cobb.

Harry Jackson, "Mother Wore Tights," (Technicolor), with Betty Grable, Dan Dailey, Peggy Ann Garner, William Frawley.

Leon Shamroy, "Forever Amber" (Technicolor), with Linda Darnell, Cornel Wilde, Richard Greene, George Sanders.

United Artists

Franz Planer, "Vendetta" (California Pictures), with DeGeorge, Faith Domergue, Hillary Brooke, Nigel Bruce, J. Carroll Naish.

Russell Harlan, "Red River" (Monterey Prod.), with John Wayne, Montgomery Clift, Walter Brennan, John Ireland.

John Boyle, "Who Killed 'Doc' Robin" (Hal Roach Prod.) (Cinecolor), with Virginia Grey, Don Castle, George Zucco.

Lucien Andriot, "New Orleans" (Majestic Prods.), with Arturo de Cordova, Dorothy Patrick, Marjorie Lord, Irene Rich.

William Daniels, "Personal Column" (Hunt Stromberg Prod.), with George Sanders, Lucille Ball, Cedric Hardwicke.

Universal-International

Milton Krasner, "The Egg and I," with Claudette Colbert, Fred MacMurray, Marjorie Main, Louise Allbritton.

Warners

Joseph Valentine, "Possessed," with Joan Crawford, Van Heflin, Raymond Massey, Geraldine Brooks.

Wesley Anderson, "Love and Learn," with Jack Carson, Robert Hutton, Martha Vickers, Janis Paige.

Peverell Marley, "Night Unto Night," with Viveca Lindfors, Ronald Reagan, Osa Massen, Brod Crawford.

Arthur Edson and William Skall, "My Wild Irish Rose" (Technicolor), with Dennis Morgan, Andrea King, Arlene Dahl, Alan Hale, George Tobias, George O'Brien.

Carl Guthrie, "The Woman in White," with Alexis Smith, Eleanor Parker, Sydney Greenstreet.

Ted McCord, "Deep Valley," with Dane Clark, Ida Lupino, Wayne Morris.

GE Issues Dmitri Tips

"Tips on Better Color Pictures," by Ivan Dmitri, has been issued in color-illustrated booklet by General Electric Company. Although primarily designed for the still color photographer, amateur movie makers will find it interesting and informative in their field also.

MGM Subjective Feature

(Continued from Page 401)

In the sequences where Montgomery appears before the mirror, the main problem was to couple the movements of the camera with his movements as he approached or withdrew, and to maintain his "point of view" without picking up the reflection of the camera. The result was accomplished by precisely keying the action to the camera stops, and by setting the mirrors into their frames at a slight angle.

Set lighting, also, presented difficulties not encountered in the average picture. Because the camera had to move so fluidly about the set, very few floor lighting units could be used. Most of the lights had to be mounted overhead, some even being hung by ropes in the center of the set.

The entirely different conception of picture required the players to look directly into the lens as they spoke their lines, a practice which in any other type of film would be strictly taboo. Also, since there could be very few cuts in the picture, scenes frequently ran as long as eight minutes per take.

For operating cameraman Jimmy Harper, the assignment was a spirited challenge. Like all first-rate operators, he had always been careful to frame and center compositions precisely, and to use only the smoothest type of camera movement. In "Lady," however, he frequently had to let his compositions go berserk in order to simulate the temporarily unbalanced viewpoint of the main character. Also, a good deal of the camera movement had to be more-or-less erratic in order to duplicate the eye movements of the detective.

Summing up the camera problems on the picture, cinematographer Vogel says: "Our biggest headache on a film like this was to accomplish all the required effects without calling the audience's attention to the mechanics of the techniques involved. Everyone working on the picture had to adopt a completely fresh point of view. We had constantly to think in terms of camera."

Sound Goes Subjective

But the headaches didn't stop in the camera department. The sound boys had their hands full trying to pick up dia-

logue as the camera went careening about huge areas of set. Often it was necessary to use as many as six microphones strategically placed and concealed. Where the "mikes" were suspended from conventional booms, the added problem of multiple microphone shadows presented itself.

Sound perspective was also a factor to be reckoned with. Montgomery recorded most of his dialogue into a portable microphone set up next to his director's chair off-scene. In the final dubbing, his voice was piped in a bit more loudly than the others in order to make the sound seem closer and more intimate, thus pointing up the subjective effect.

Preliminary previews of the film have drawn highly enthusiastic audience reaction, and it is likely that the nation's filmgoers will respond favorably to a picture such as this and is actually an experience to watch. To the cinema technician it will come as a special treat, since it establishes a unique concept of picture-making and tends to prove that there is, indeed, something new under the Hollywood sun.

167th Signal Corps Company Publishes Combat History

A most complete and comprehensive history of the activities of the 167th Signal Photographic Company, United States Signal Corps, U. S. Army, has been issued in a 150 page book compiled by the group.

Generally, there's at least a five or ten year lapse between the disbanding of a company before someone interested gets the urge to round up a history. But the boys of the 167th stepped right in early this year, when both information, memories and pictures were available for the compilation.

Tribute is paid to the commanding officer, Captain Merle Chamberlain, of Metro - Goldwyn - Mayer studios; and through breezy writing and a wealth of pictures, the training, maneuvers, and detailed action of various units overseas with the 12th U. A. Army are neatly described. For the members of the 167th, the history must be one of the most prized possessions of the association.

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Birmingham's International Open Exhibition Set

Birmingham Photographic Society of Birmingham, England, will present its 51st annual International Open Exhibition February 1st to 15th, 1947; with entries to be judged by Alexander Keighley, Hon. F. R. P. S. Information and entry forms may be secured from Vernon Bates, A. R. P. S., 41 Spies Lane, Birmingham, 32, by those interested in submitting prints and slides. Entries close January 7th.

Spangler Represents Telefilm

Ralf M. Spangler & Associates of Hollywood have again been appointed national advertising and publicity representatives of Telefilm Studios Inc., 16mm, film studios of Hollywood, for the coming year.

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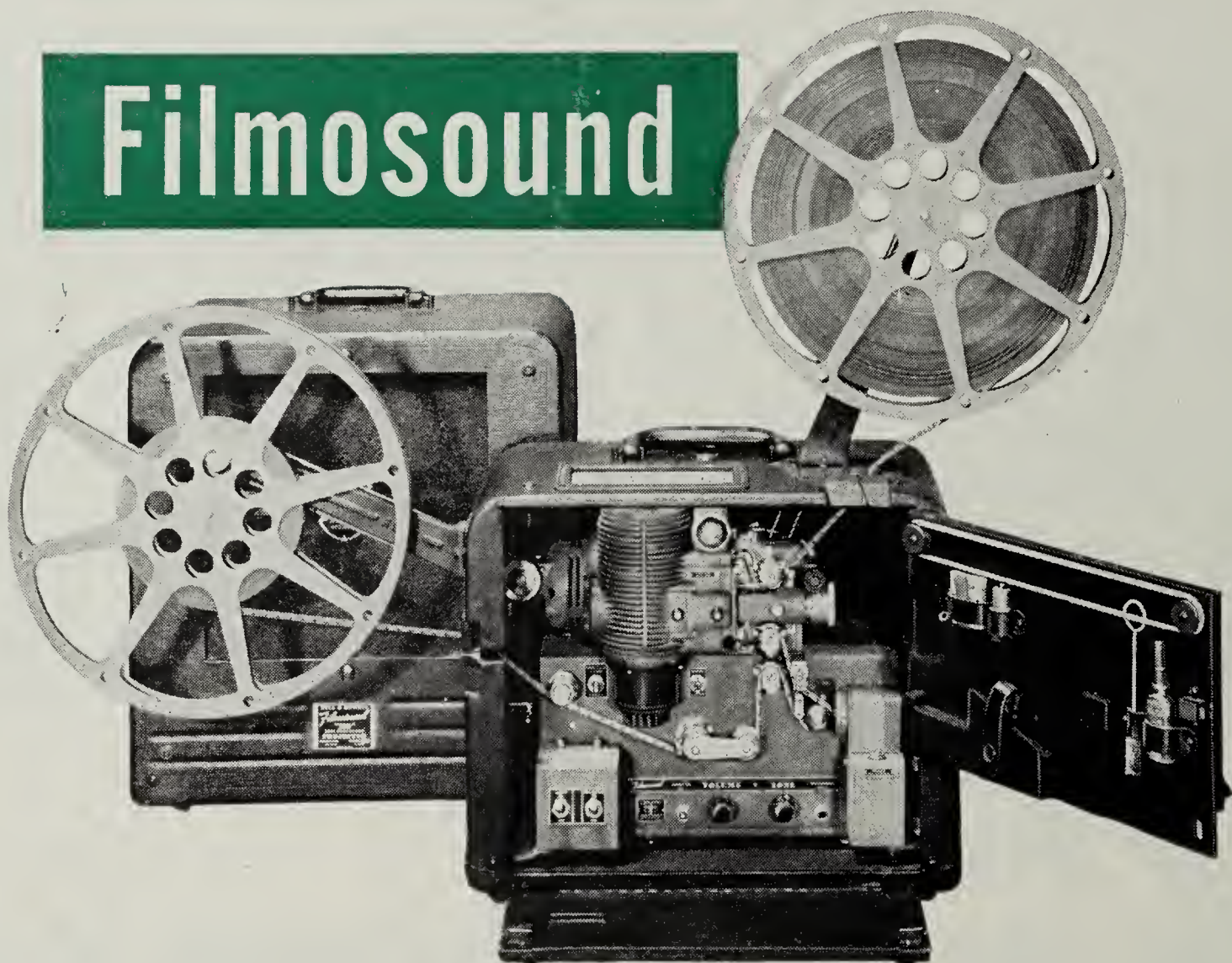
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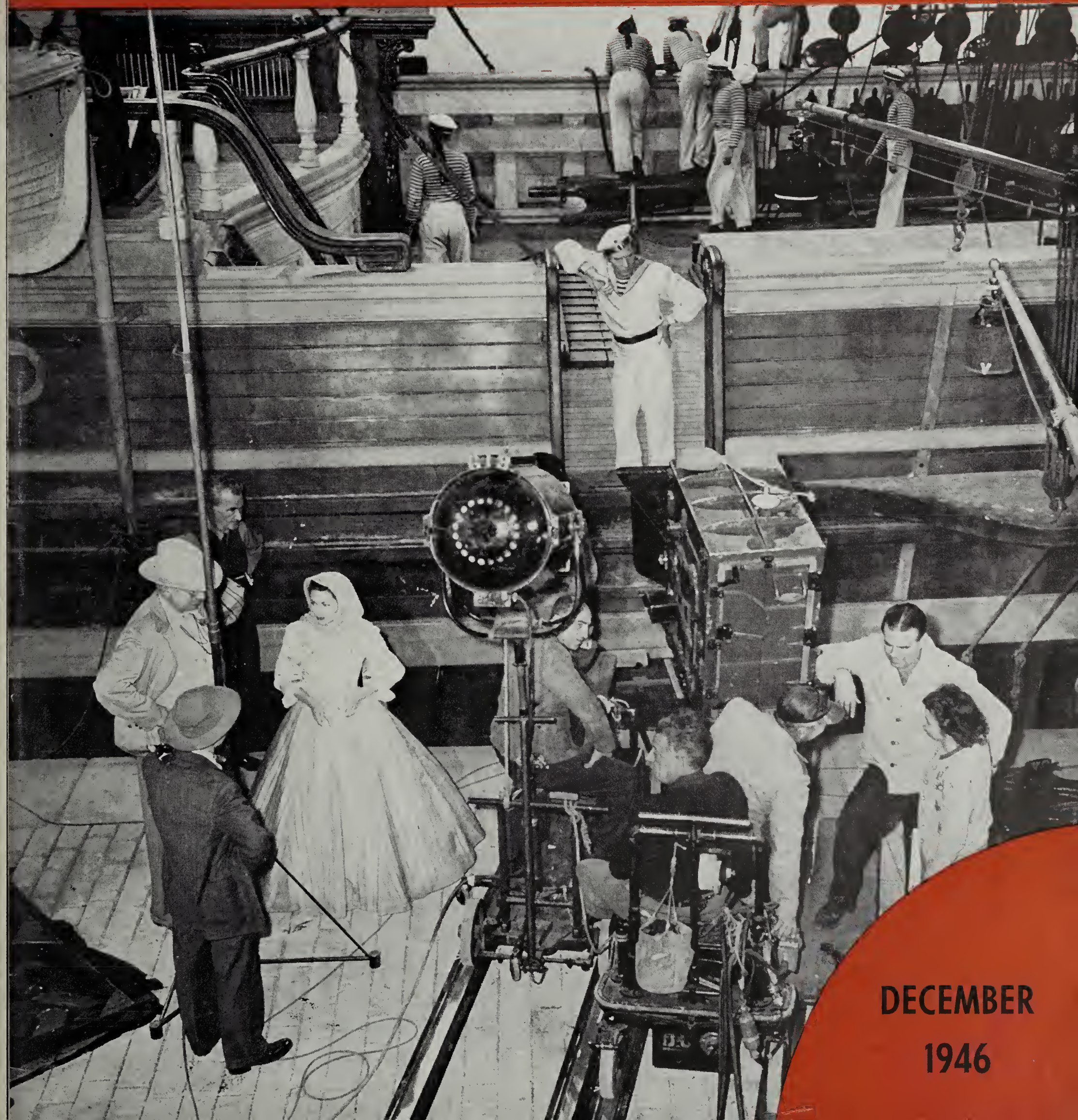
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THE MOTION PICTURE CAMERA MAGAZINE

VOL. 27

DECEMBER, 1946

NO. 12

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ON THE FRONT COVER—Director of Photography Hal Mohr, A.S.C. (at left in white hat) stands by while technicians set up the lights and equipment for a big production shot in "Fandango" at Universal International. Picture, being filmed in Technicolor, stars Jean Pierre Aumont and Yvonne De Carlo.



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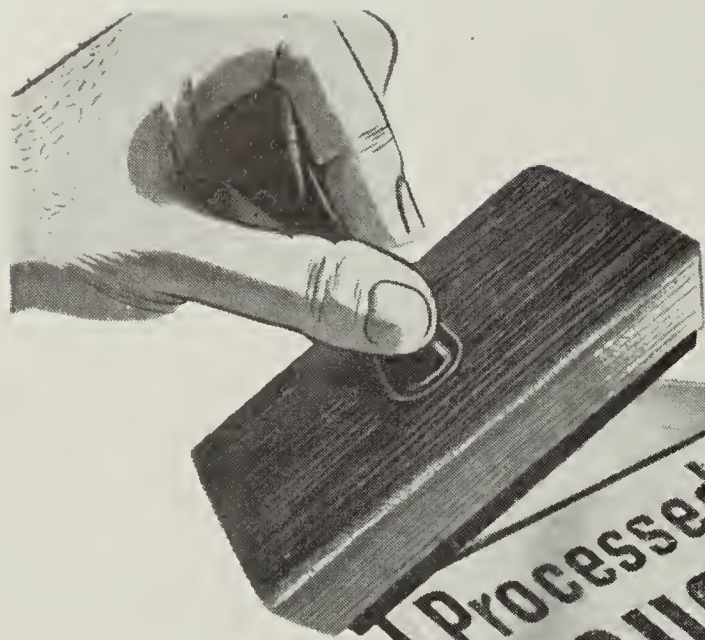
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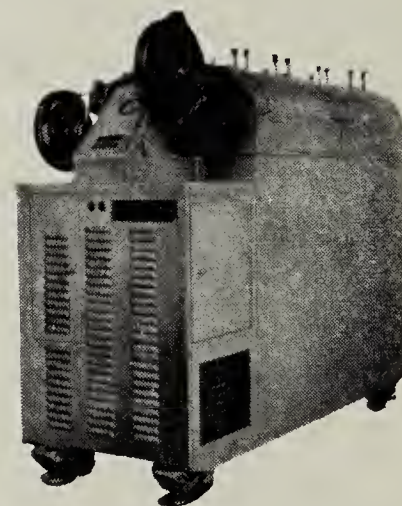
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ACES of the CAMERA

ED B. Du PAR, A. S. C.

By ROE FLEET

THIS month, in view of the 20th anniversary of soundfilms, it is appropriate that we introduce Ed Du Par, A.S.C., the motion picture photographer who was directly associated with the initial experimentation and development of sound pictures for

Warner Brothers back in the mid-twenties.

Prior to taking his stance behind a motion picture camera, Du Par had toured in a vaudeville act under billing of "The Dancing Du Pars, the boys with the educated feet." They finished

a tour of the Sullivan and Considine circuit in Los Angeles, and Ed quickly got a job at the old Mack Sennett studios running props for director Eddie Cline. Shortly thereafter, he joined the special effects and trick camera department headed by Fred Jackman, Sr., and—although later on a production camera for a good many years—he could not resist the call to return to the intriguing work of special effects, and became associated with the Warner department in 1935 for a current 11-year tenure.

Special effects and trick photography taxes the ingenuity of the photographers at every turn, and is one of the most fascinating branches of motion picture camera work in production. Du Par, with detailed and thorough training in the first trick photographic department in Hollywood under Jackman at the old Sennett studios, figures that this supplemental type of assignment is most important to the complete photographic success of a production; and never lacking in inventiveness.

Du Par's story might better be told in the first person as he described his experiences. Shortly after joining the Sennett organization, he stated that Fred Jackman, who was devising the special effects and trick shots that added materially to the fame of the Mack Sennett comedies, asked if Ed would like to join his staff.

"Of course, I jumped at the chance," Ed explained. "One of the first jobs I had with him was down at the Palisades in Santa Monica. At that time the streetcar tracks crossed the mouth of the canyon on a bridge with telephone piling. Fred had figured out a shot with a couple of autos chasing each other as they went in and out of those pilings. In order to cover the shot we had to go up on top of the Palisades and come down a little ridge to a point where we could set up the camera. Well, we got the camera down and set up—an old Pathe, by the way—and Fred said he would go down and direct the chase while I was to photograph it. He instructed me on the speed of the crank, and departed. In the meantime, a good stiff breeze came in from the ocean, hit the cliffs, and almost blew the camera and me off the cliff for a drop of about 100 feet. Despite this, we made the shot, and I did my best to crank at the speed and still keep it steady—but it was at speed of 6, while at the time the dramatic speed was 16 and the cranking for comedy 12.

"Fred told me I had better practice speeds, as I would be doing a lot of cranking, so I got a stop-watch and camera and practiced on the different speeds to get them set in my mind and make it more automatic in judging. I almost wore out the camera practicing, but got so proficient that I could go from stop motion to 16 and back again in a scene. In those days, when you changed speeds, you had to crank with

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"THE KILLERS"

Teamwork On Film

PRODUCTION

By HERB A. LIGHTMAN

IT happens all too frequently in Hollywood that, during the course of shooting a motion picture, the sound stage becomes a kind of arena in which clashing personalities and "artistic temperaments" lock horns, often with serious detriment to the resulting film.

This friction does not always erupt into open warfare, but makes itself felt in a kind of tug-o'-war between egos, so that each player or technician becomes bent upon making his particular speciality stand out from the rest of the picture whether it remains in key with the overall production approach or not.

Since this procedure is more often the rule than the exception, it is refreshing and professionally encouraging when, once in a cinematic blue moon, a film is completed that exemplifies the very essence of creative teamwork in picture-making. Such a film is "The Killers," a Mark Hellinger production, now in national release through Universal-International.

"The Killers," besides providing tense-paced thriller entertainment, comes to the screen as almost pure cinema. It is a story that could not have been told

with such stunning force in any other medium. More important, it is a film whose smooth blending of the various production elements is so perfect that it is difficult even for the critic to tell where the effect of one technique leaves off and that of another begins.

Such a result is not accidental. Such excellence is never haphazard. In this particular case, the smooth integration of production elements is the result of a definite point-of-view originated by the film's producer and projected with contagious enthusiasm to the players and technicians. The proof of the cinematic pudding lies, not only in the extravagant critical acclaim which has been heaped upon the film, but also in the warm box-office welcome the picture has received in playing dates throughout the country.

Mark Hellinger, producer of "The Killers," is a man whose many years of background as newspaper reporter and columnist have given him a dramatic instinct that is *realistic*, and at the same time, *human*. He is a down-to-earth, cards-on-the-table, thoroughly likable personality whose own glowing

enthusiasm for motion pictures conveys itself to his co-workers with productive result.

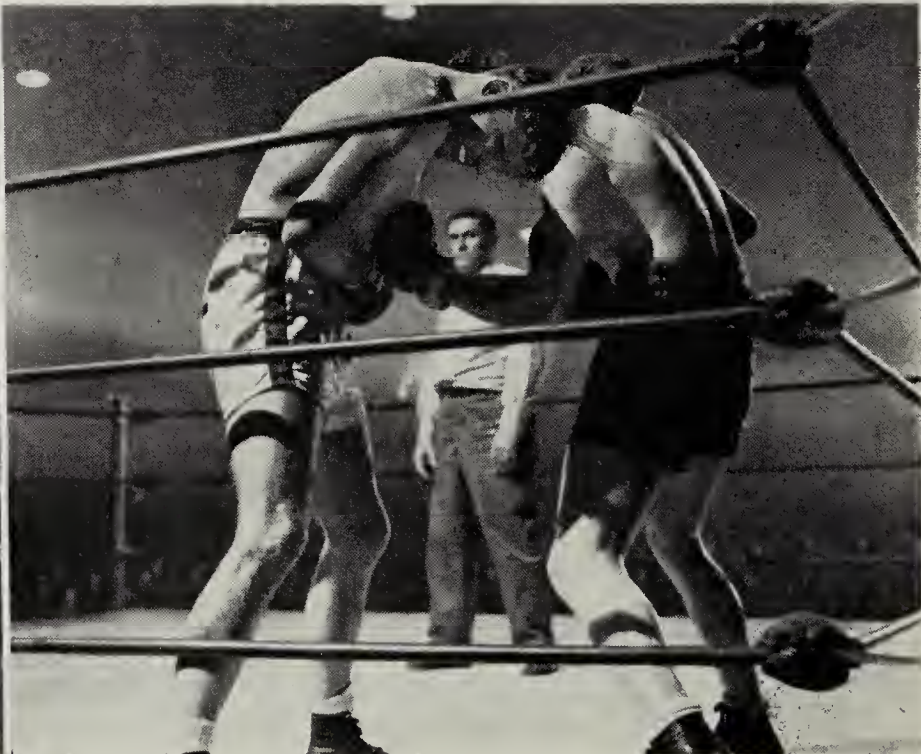
He first became interested in Ernest Hemingway's story, "The Killers," when it was initially published in 1927, and he felt that it would make a smashing opening sequence for a motion picture. In later years, after he had become a film producer, he tried to interest several studios in filming the property, but when he mentioned the author's price (\$50,000), studio heads invariably began to talk about the weather.

Independent Set-up Scores

It wasn't until Hellinger joined Universal-International as an independent producer that he was able to draw a responsive ear for "The Killers." Then, lo and behold, the studio promptly bought the yarn without any quibbling about price, and told him to go ahead and film it. All this in the face of general opinion within the industry that this particular short story could never be successfully expanded into a feature-length film.

It is no wonder, therefore, that Mark Hellinger is highly in favor of the independent producing set-up. "Under the usual studio system," he points out, "a producer is often handed a story for which he has no personal enthusiasm. He turns it over to a director who grudgingly agrees to 'do his best with it'—and the other technicians, sensing this lukewarm attitude, are similarly uninspired about the whole thing. By way of contrast—when the independent field functions correctly, a very happy state exists. The producer does not make a picture unless he is personally enthusiastic about the story, and it is that enthusiasm, carrying over to the other technicians, that results in a well-integrated film."

In the case of "The Killers," once the story had been purchased, there remained the job of expanding it into a



Into a wayside lunchroom (at left) come two paid murderers stalking their prey. This situation forms the opening sequence of "The Killers," Mark Hellinger's outstanding film adaptation of Ernest Hemingway's short story. Through flashbacks, we explore the life of the murdered man, including his career as a boxer (at right). "The Killers" is an outstanding example of effective teamwork between the various technicians engaged in production.



Photographic treatment of "The Killers" sets a new standard of realism that is at the same time artistic. In the prison-cell sequence (at left) a single shaft of light was used as illumination to sharply point up the dramatic situation. The burial sequence (at right) was shot with OUT-OF-BALANCE lighting, making dramatic use of black and white contrast. Cinematographer Woody Bredell, A.S.C., keyed his cinematic approach precisely to story's dramatic requirements.

suitable script. It was planned to retain the original story intact for the first sequence, and construct a complete background for the action shown. There were to be no stars in the picture, a situation that is usually a definite handicap at the box-office. In this case, however, it worked as a distinct advantage, since scenarist Anthony Veiller was able to write the story as it should be written, without having to rearrange the plot to fit the talents of specific stars.

Besides the original Hemingway story, there were certain other dramatic situations which producer Hellinger wanted to include in the screenplay—notably the deathbed confession of gangster "Dutch" Schultz, and the details of a daring payroll robbery which occurred several years ago. Blending all these elements, the scenarist evolved a tight, hard-hitting screenplay that consistently retained the atmosphere of the original Hemingway yarn.

Production Jig-Saw Puzzle

As the script was being polished, Hellinger began to assemble his technical staff for actual shooting of the picture. He had been very favorably impressed by the cinematic quality of "Phantom Lady," a thriller that Universal made several years ago. Fortunately, he found that both the director of that film (Robert Siodmak), and its cinematographer (Woody Bredell, A.S.C.) were available for his unit.

A preliminary conference followed in which the production was discussed from every possible angle. Both the director and cinematographer had suggestions to offer on treatment, and Hellinger encouraged them to "kick the story around" and let their imagination play with it. "This method worked like a charm," he recalls, "Director Siodmak deserves special credit for his contributions to the screen treatment. Usually, when you hand a director a script, you are happy if he can bring out 85% of

the potential dramatic values it contains. But when you give the script to a director like Siodmak and he gives you back 125%—well, you've really got something there."

Meanwhile, cinematographer Bredell was casting about for a special photographic treatment to bring out the best in the story. Extensive casting tests had to be made to select the right girl for the lead. As he worked on these tests and experimented with different styles of lighting, a certain forceful photographic quality began to find its way onto the film. A magnificent camera mood evolved, a mood which later permeated the entire picture.

With the producer, director and cinematographer thus inspired, enthusiasm soon became contagious. The other technicians and players became eager to do their best. From the very beginning, something in the air indicated that this was going to be an outstanding film. So confident was Hellinger, that he was willing to show separate scenes and sequences to the press even before the film was completed—a risk that is rarely taken in criticism-conscious Hollywood. The simple truth of the matter is that one good technical job encouraged the other technicians to do a good job also.

"It's like being used to playing golf with a bunch of duffers," Hellinger points out, "When all of a sudden you find yourself playing with a set of pros, you try to give the game all you've got. In an all-around good picture, every phase of production looks good. But if, on the other hand, a picture is generally poor, brilliant direction, striking camerawork, or any other one outstanding phase of production usually goes unnoticed."

The Director and the Camera

Rarely has there existed such perfect rapport between cameramen and director as characterized the filming of "The Killers." Siodmak is a director who real-

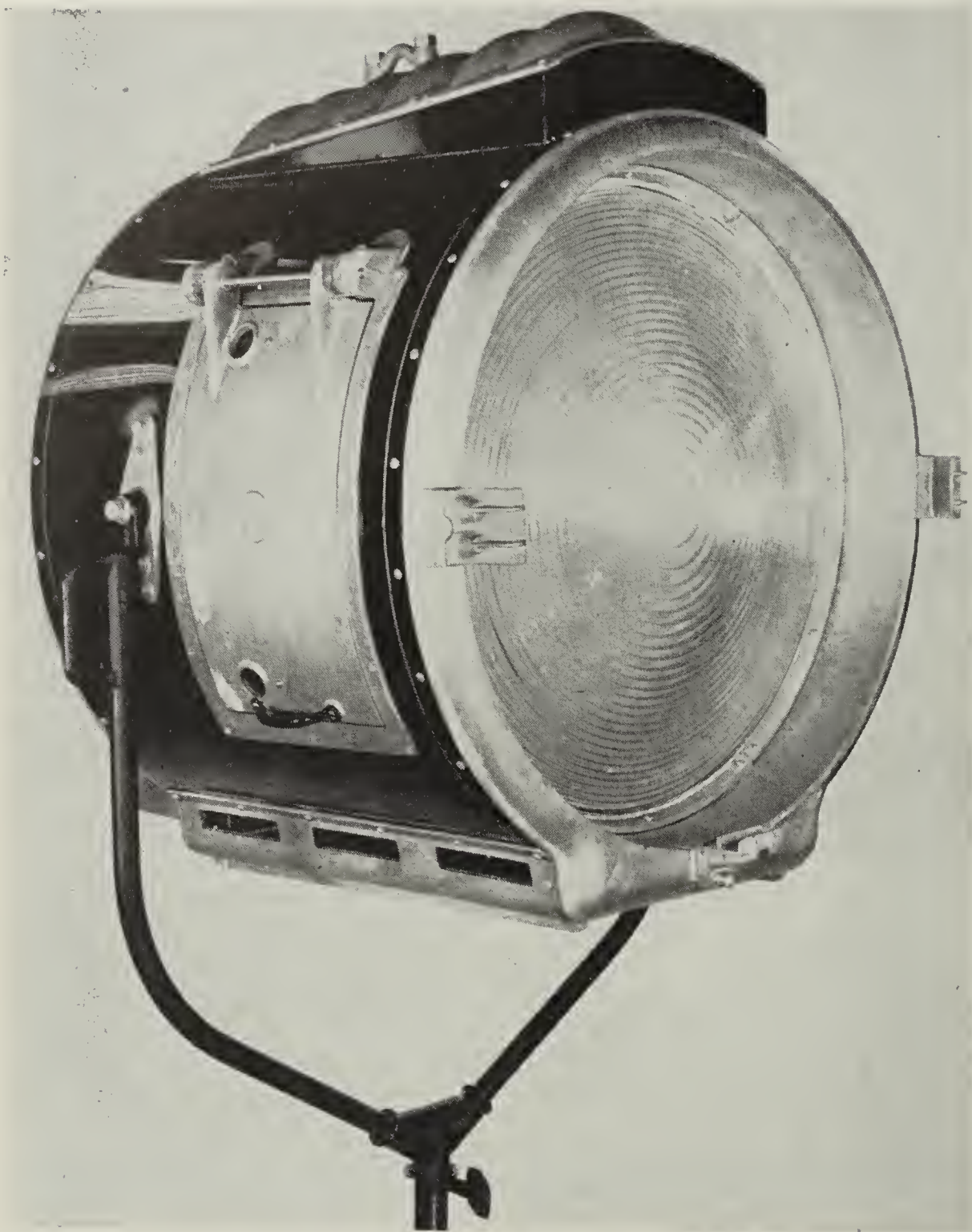
ly knows his camera and uses it to paint a dramatic picture in the same way that an artist would use his brush. He designs all of his own camera set-ups in closest cooperation with the Director of Photography.

"The creative use of the camera is a lost art," he maintains. "We have let ourselves over-glamourize motion picture photography to the point where it becomes unreal. Actually, there is no such thing as photography that is in itself good or bad. All that is really important is that the camera convey something expressive within the scene."

Siodmak prefers to follow a screen story through every phase of production. He likes to be in on the "heartbreak" of writing the script. He is interested in every technician's job, and he appreciates what they all contribute to the film. Similarly, he feels that everyone working on the picture should be familiar with the director's conception of the story. He works out his key scenes in precise detail before shooting begins, but relies entirely on his own impressions during filming to fill in between these key scenes. He feels that the director is the one technician who can really see the overall concept of the film. Therefore, it is this basic production pattern that must be followed. However, within that pattern, the cinematographer and allied technicians should be left free to experiment and create forceful effects.

"I am happy if, out of an entire feature, I can place on film 500 feet of pure cinema," Siodmak explains. "Art is nothing more than the elimination of unessential details. Therefore, the filmic presentation should always leave something to the audience's imagination. In modern production it is a temptation to overdo the use of unusual techniques, such as the moving camera. In 'The Killers,' rather than use unmotivated camera movement, we employed a relatively

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THE M-R "BRUTE"

A New Super High Intensity Carbon Arc Lamp

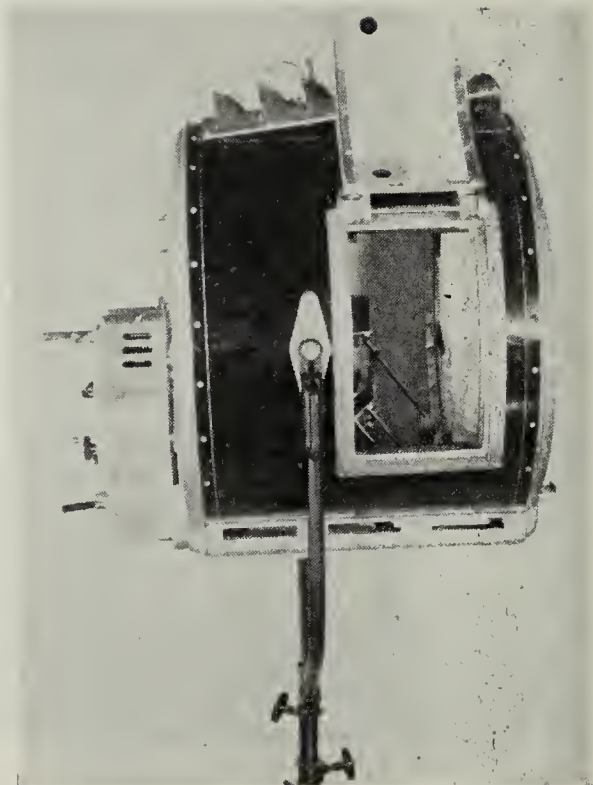
By PETER MOLE

The faster the film the more light the cinematographer uses. Although a paradox that statement is essentially true. A clearer statement would be to the effect that as better tools become available, the cinematographer uses them to improve his work. With an increase in film speed he may use half the light or he may double the amount. His goal is *dramatic effect* and he does it with *light*. A study of the advances in cinematography during the past ten years will more than justify his position.

The new Mole-Richardson Type 450

carbon arc lamp was designed and built as a result of the insistent demand from cinematographers for a light source with twice the intensity of the present Type 170 M-R Hi-Arc. The type of carbon trim, current, voltage, and optical system were all chosen or designed with the requirements set forth by the cinematographers themselves as a goal.

Fig. 1 illustrates how these requirements were met. With a 48° beam spread, which is approximately full flood, the Type 450 gives exactly double the lumens of the Type 170. With 12° beam



spread on the Type 450 and 10° beam spread on the Type 170 the ratio is further increased.

Fig. 2 illustrates the comparison between the Type 450 and the Type 170 lamps in light intensity. Within a 20 ft. diameter spot. This increase in penetrating power gives the cinematographer a lighting tool with which he can produce streak lighting, shadow detail, penetrate the deepest of sets, boost high levels of daylight or create a "one source" lighting effect even when the general set light levels are high. By operating at full flood position he can cover areas with the one lamp.

Fortunately this 100 per cent increase in light output was obtained with only 50 per cent increase in current. The Type 450 unit operates with a 16mmx22" super high intensity positive MP studio carbon and a 17/32"x9" cored Orotip negative carbon burning at 225 amperes and 75 arc volts, whereas the Type 170 lamp burns a 16mmx20" MP studio positive carbon and a 1/2"x8 1/2" MP studio negative carbon at 150 amperes and 67 arc volts.

The newly designed Fresnel type condenser lens on the Type 450 lamp has a curved surface and is of 24" diameter which gives it a greater light pick-up angle than the 20" diameter flat surface condenser of the Type 170. The main advantage of the larger diameter curved surface condenser is that it provides for a greater arc-to-condenser distance at various beam divergencies, thereby minimizing the danger of condenser breakage from the increased heat.

The Type 450 lamp head is not just a modification of the Type 170. The 100% light increase and 50% current increase created problems of heat transfer and ventilation requiring a radical departure from the conventional rotating high intensity lamp design.

The arc control motor, motor rheostat, arc switch and pin plugs were all removed from the heat of the body of the unit and located in a separate compartment on the rear lamp casting. Inas-

much as the balance of the carbon feeding mechanism is mounted on the front of this same casting, the whole forms an integral unit which may easily be removed for servicing.

By these changes in design it was possible to build a lamp head, capable of continuous operation at 225 amperes, with no increase in length, only 4" increase in diameter and slight increase in weight over the Type 170.

The color quality of the light from the Type 450 is essentially the same as from the Type 170 and when used for daylight balance, as in shooting color, the unit should be equipped with a Y-1 filter.

A number of the Type 450 lamps have been completed and are now undergoing a production test routine in the studios. Any additional knowledge gained from this preliminary work will be incorporated into the final design which will be set for production in the near future.

In order to receive the most benefit from this production work Directors of Photography and A.S.C. members who are using the new Type 450s are being interviewed. Some of their comments are paraphrased as follows:

John W. Boyle: "We used the 450 on a Cinecolor picture at Hal Roach. We were on a theatre set and wanted a shot of the audience from the stage with a light level to indicate that the theatre was well illuminated. We set the 450 on the stage and adjusted the beam spread to cover an audience of about one hundred and fifty people. With the use of scrim we were able to control the light intensity from foreground to background."

"What other lamps were used?"

"We used a few lights here and there

for balance, but the main source of light was from the 450. In that particular shot the 450 replaced several other lamps because of its ability to carry from the stage to the back row of seats."

Wilfrid Cline: "We used the 450 on a Technicolor dance number at Warner Brothers. It is an excellent source as a main front light unit when operated at full flood position. We adapted a set of venetian blinds to it and were able to dim it in that manner.

"A most interesting use, however, was for a special effect we were after and were able to accomplish because of the 450. We wished to project a 20-foot diameter star pattern onto the floor with sufficient intensity to overcome the general set level and to enhance the effect by gradually dimming the light around the star pattern. We hung the 450 about 30 feet above the set pointing straight down. A few feet below the lamp we hung a board with the star shape through it. The effect was perfect."

"Did you try a Type 170 for that effect?"

"Yes, we did, but it was not powerful enough."

NOTE: Fig. 2 shows that the Type 450 will deliver three times as much light as a Type 170 in a 20-foot diameter circle at 30 feet distance.

Sol Polito: "We wanted a lamp for a particularly large set to be shot with black and white film at RKO-Pathe Studios. It covered the entire area of stage 15, and we shot from the adjacent stage 14. There was considerable open area in the foreground with few characters and a lone wagon. The problem was to find a single source of sufficient penetrating power and light volume with which to

illuminate the entire area in order to obtain single shadows. The 450, adjusted to full flood position, was placed about 30 feet and 50 to 60 feet from the action. It did the job in fine shape."

"You used other lamps, of course?"

"Yes, for fill light, balance, behind windows, etc., but the main source of illumination was the 450. It produced just the effect we were after. In fact we had to use scrim in certain areas to cut down the light."

"Would you say that most of the photographic light came from the 450?"

"Yes, it did in this particular shot. As a matter of fact when you light that lamp everything else seems to be out."

Ray Rennehan: "We are using the 450 on a current Technicolor picture at Paramount. On certain shots it provides the main body of front illumination. It is possible to cover an area with the 450 and build up to it with the other sources in a more satisfactory manner than if we used a source of lesser power. This is particularly true if a one-source effect is desired.

"The need for a more powerful lamp has long been recognized. This does not indicate that more overall light is required than is available at the present time. As a matter of fact, it could mean that in certain cases the power used for a given shot may be less because of the wider latitude of lighting media."

The Type 450 lamp is not expected to revolutionize the art of cinematography. It is a new and more powerful tool with which to make better pictures. Its increased power may mean double the light on the set, and it may mean half of the light. In either case it is a small factor. *The picture is the thing.*

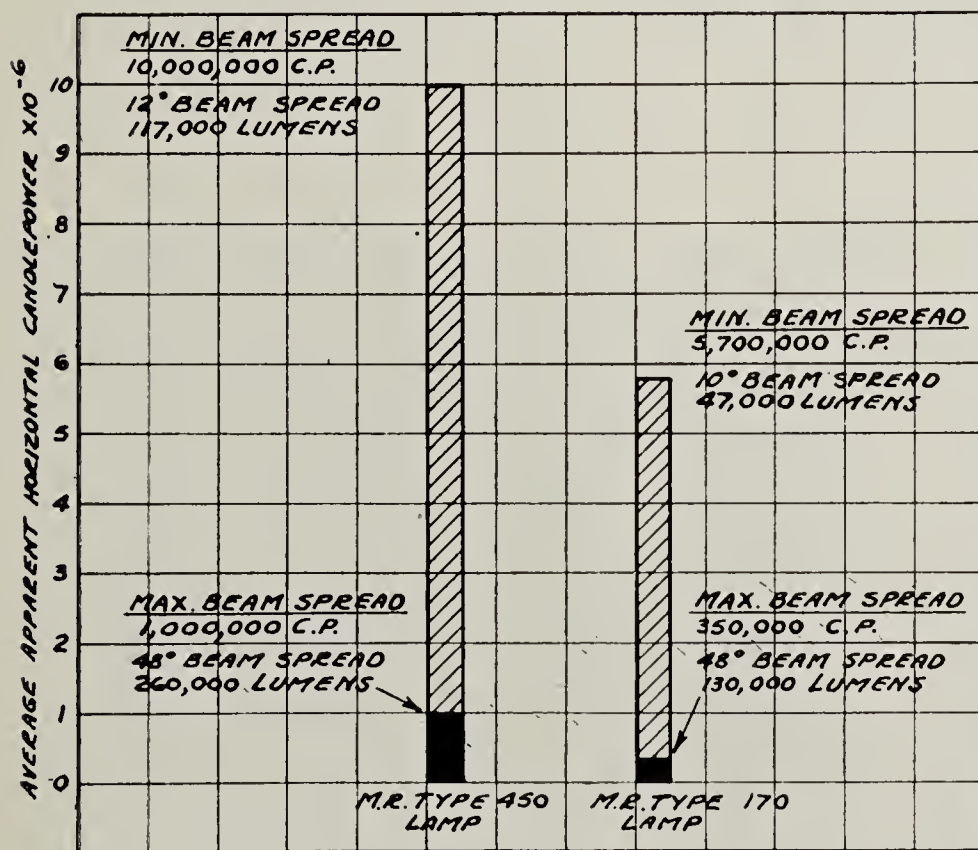


Fig. 1. Chart indicating relative illumination characteristics of MR-type 450 lamp burning the 16mm. super H.I. studio positive at 225 amperes, and the MR-type 170 lamp burning the 16mm. H.I. studio positive at 150 amperes.

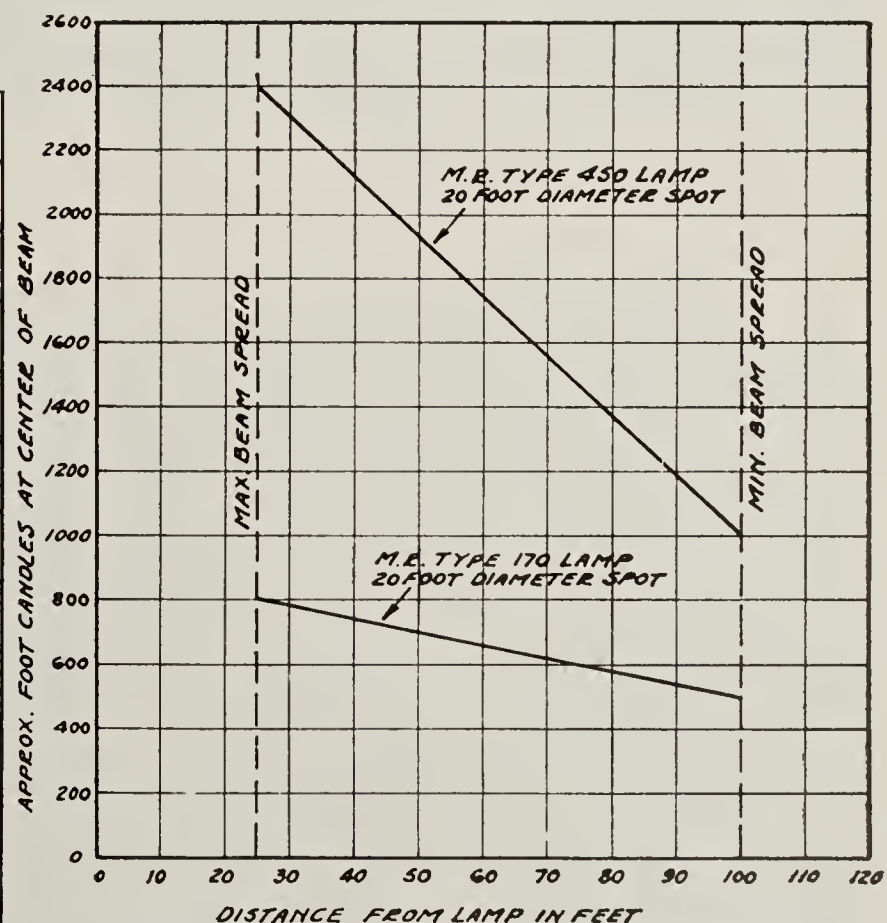


Fig. 2. Typical curves showing illumination at center of 20-foot diameter* spot at various distances from MR type 450 lamp burning the 16mm. super H.I. studio positive at 225 amperes, and MR type 170 lamp burning the 16mm. H.I. studio positive at 150 amperes.

* The diameter of the spot is defined as the diameter at which the illumination is 10% of the maximum illumination present at the center of the spot.



THE LATE DOUGLAS FAIRBANKS, SR. AND RALPH STAUB, A.S.C.

CAMERA AND TRIPOD ON HIS SHOULDER

By HAL HERMAN

WITH movie making now advanced to the point where a throng of technical specialists is on hand to supervise every fine detail of production, the experiences of Ralph Staub who has often been called a "one man production company" because of his operations in the short subject field are both interesting and refreshing.

Beginning as an eager young camera assistant at the age of 16 with Ruth Roland more than 30 years ago, Staub has parlayed his enthusiasm, diplomacy,

and resourcefulness into a highly successful career. Also, he has encountered just about every type of problem it is possible for a cameraman to run into.

He's spent about fifteen of those years in his present post turning out the popular "Screen Snapshot" reels for Columbia Studios. Altogether, he has made 614 one- and two-reel shorts covering every conceivable subject from snow covered Mt. McKinley, in Alaska, to the activities of Hollywood

celebrities, racing thrills, symphony concerts on the desert, and Mack Sennett comedies.

In his comfortable office at Columbia, Staub is able to plan his work for the future with first hand knowledge of changing trends in the short subject medium in which he has so long had a hand. Also, today, he has the assistance of a full technical and production crew whenever he needs it.

"But it wasn't always like this," Staub explains. "In the early days I had to do everything myself. In addition to shooting the camera, I was also my own writer, director, location manager, prop man, makeup artist and wardrobe man.

"There were times," he admits with a grin, "when I wished that I were quadruplets. But somehow, by improvising and using a lot of persuasion, drafting the help of chauffeurs, bellhops, waiters or anyone else I could find, the job was done."

The experiences which Staub has lived through since he first slung an ancient Leonard A-1 camera (later developed into the Mitchell) over his shoulder in 1923 and started out to make movies on his own, would make a fascinating book—if he ever took time out to write it. It would provide numerous worthwhile tips to any cameraman planning to shoot newsreel type shorts on current events, prominent personalities or even travelogues.

Naturally, Staub agrees, the modern, skilled technical men now at his disposal do make his work in filming short subjects easier and faster than it was in the past. But there was a challenge in making those early day shorts almost alone which kept his job always interesting and exciting.

"In those days," the veteran cameraman-producer recalls, "I never knew what situation I might run into when I started out on a job alone. I often worked on a rather limited budget and had to shoot a reel that was interesting and entertaining—and still get it fast.

"I remember the time I went out to shoot some footage on the late Jean Harlow, who was one of my favorites and a grand person to work with. She had just finished doing "Hell's Angels" when I called and made the appointment. I arrived at her home with my camera, reflectors, props and a lot of other equipment, and we promptly went into a huddle to figure out the action for the scene.

"Before we were through we had dreamed up a rain sequence which, today, would require a crew of twenty to shoot. I had to improvise and do it alone.

"The action called for Miss Harlow to step out the front door of her house and snap open an umbrella as she started down the walk. Each time she stepped outdoors it would start to rain. And when she opened the umbrella, the rain, for comedy effect, would stop."

To shoot the scene Staub propped his reflectors in place on the lawn,

gave Jean's chauffeur a five minute course in cranking the camera (yes, they cranked 'em in those days) and himself handled the tricky business of turning the rain on and off by bending and releasing a length of rubber garden hose attached to a nearby hydrant.

"Not much of a setup, I'll admit," Staub confesses today, "but that scene turned out okay. It was good for plenty of laughs when it hit the theaters. Improvising enabled me to get it without a lot of delay and expense."

During the years he has devoted to filming informal reels on screen stars at work and play, in and out of the studios, Staub has found that diplomacy and the ability to get along with people pays a huge dividend.

"You've simply got to be tactful," Staub contends. "And if you make your reels novel and refreshing enough to interest your subjects as well as the prospective audience, you'll find them a lot more cooperative. It's important, too, to get your scenes quickly and with as little fuss and bother as possible."

Although he has worked through the years with nearly every big name star in Hollywood, it is a well known fact that Staub has never worn out his welcome. That is a record of which he is justly proud.

"I always plan my shooting in order to save the stars' time and make it as easy for them as I can. On several occasions I've even called in the players' favorite makeup men or hairdressers—so they would be confident of looking their best for the camera," he added.

"When I promised a couple of the stars, Marlene Dietrich and Jack Benny, that they could see the completed reels in which they had appeared, I made very sure that they did view it before release."

Such consideration of his principals, whether they were film stars or sports or political figures, Staub says, has enabled him to build a lot of good will and keep these personalities ready to work for him again in the future.

Among the more than 600 subjects which Staub has shot or supervised, or both, are reels on swank movie affairs, parties at the Cocoanut Grove, bathing beauty parades at the Ambassador Lido Pool and Palm Springs, floor shows and glamor girls at filmtown night spots, the bicycle races and more recently the Sidney Skolsky party at Schwabs Drug Store and a birthday party for a horse given by cowboy comic, Smiley Burnette.

Staub is credited with being the first cameraman to shoot a Hollywood news-reel type of short on a studio stage. That was in 1924 when he was filming a reel titled "How Movies Are Made." He shot on the set, right beside the regular production camera and enjoyed the fullest cooperation of cinematographers and such name directors as Frank Capra, Cecil B. DeMille, Al Green and Michael Curtiz.

Providing an intimate, behind-the-scenes glimpse of their screen favorites at work, the reel proved highly popular with theater-goers. Staub secured the footage largely through his diplomatic approach and presentation of his ideas to the directors and stars concerned. They knew in advance just what he wanted and why he wanted it.

"A long time ago," Staub continued, "when Richard Barthelmess was at work on 'The Patent Leather Kid' (1925) I decided to make a short reel of action scenes showing him in training for fight sequences in the film. I thought the novelty of a screen favorite slugging it out with a professional boxer would be different and interesting."

Staub went over to the outdoor ring where Barthelmess was sparring with his trainer, Nate Slott, and made a few long and medium shots to start with. Then he ran into the problem of trying to get some important closeups of the action. This was in the days before huge camera cranes were generally available.

"In order to film a number of closeups in which gloves and arms would smash close past the camera lens,"

Staub said, "I had to resort to more improvising. 'I built a special rack fastened to my shoulders with straps, which held the camera firmly in place as I moved about the ring. By stopping the lens down in bright sunlight I was able to move smoothly in from medium shots to closeups of faces and gloves with good effect—and still keep them in sharp focus. The arrangement enabled me to add a few zoom and dolly shots—all on foot. The effect on the screen was startling—in consideration of the way it was filmed, and not at all jumpy as I had feared.'"

An entirely different problem arose while Staub was filming a few scenes of the late Carole Lombard at her home. This time he drafted the star's mother, Mrs. Peters, to hold the reflectors serving as a backlight and had a butler pull him along the sidewalk in a small boy's wagon for a dolly shot. A few days later at the home of Lois Wilson, then at the height of her fame, he borrowed the star's dresser mirror, to replace a missing reflector, and used a couple of old lace curtains as a scrim to soften the shadows on Miss Wilson's face in a garden scene. Of course he was directing and shooting these scenes as well as dreaming up the script and doing his own prop work for the occasion.

Many years later Staub directed Phil Regan in a Technicolor picture, "Romance of the West," for Warner Brothers. Here he ran into another situation which his past experience as a "one man operator" helped solve. He was trying to get a scene at the foot of a huge falls in Yosemite National Park. The spray from the falling water kept fogging the lens. Shooting was stopped cold and the company faced with an expensive delay. Finally Staub rigged up a piece of plain window glass in front of the camera and poured a continuous stream of water over the glass to kill the spray. With this improvised setup the scenes were filmed in short

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"Keystone Hotel," produced and directed by Staub for Warner Brothers.



The late Jean Harlow as she appeared in a Screen Snapshots clip for Staub.



DR. WILBUR B. RAYTON PASSES

*Outstanding Optical
Engineer*

DR. WILBUR B. RAYTON

Dr. Wilbur B. Rayton, A.S.C., director of the scientific bureau of Bausch & Lomb Optical Company and one of the foremost optical engineers of the nation, died suddenly in San Francisco on October 31st, while on a business trip to California. A week before his death, Dr. Rayton delivered a paper, "A New Series of Camera Lenses for 16mm. Cinematography," at the convention of Society of Motion Picture Engineers, and remained in Hollywood to be guest speaker at the clubhouse of American Society of Cinematographers on October 28th to deliver a talk on "New Developments in Motion Picture Lenses."

A member of the Bausch and Lomb firm since 1908, Dr. Rayton was appointed head of the scientific bureau in 1926. Only two months ago, he received the Navy Ordnance Development Award for "distinguished service to research and development of gunfire control equipment" during World War II.

Dr. Rayton was one of the recognized authorities on motion picture optical engineering and development, and widely known in the film industry for his most important contributions on development of lenses and practices for nearly 40 years. His collaboration in the development of such items as the range-finder, multiplex mapping equipment, height-finders, the Keratometer (for measuring Corneal Astigmatism), microscopes, Or-

thogon (spectacle) lenses, aviator goggles with corrected lenses, etc., are numerous.

In the field of photography, some of his outstanding contributions include: Raytar lens series of motion picture photographic lenses; Baltar series of 35mm. motion picture photographic lenses; super-Cinephor series of motion picture lenses (both coated and uncoated); 20mm. f:1.5 lens for 16mm. cameras; 50mm. f:1.6 projection lens; aerial camera lens, including the famous Metrogon six-inch lens used by the U. S. Army and Navy for aerial reconnaissance—also the 24-inch f:60 Tessar lens; astronomical photographic lenses, some in use in the Mount Wilson Observatory; 40-inch, long-focal length telephoto lens.

Wide angle lens attachment for amateur motion picture cameras; a series of X-ray lenses, f:2.0 and f:1.5; designer of a condenser system used in wide field film projection; polarizing photometer for measuring light intensity and density (this has had wide application for sound track on motion picture film); the densitometer; and introduction of the first anastigmatic lens for motion picture projection. All of the above inventions and applications are credited to Dr. Rayton by Bausch & Lomb as among his more important contributions to optical science and industry.

Dr. Rayton, 61, was born in Rochester

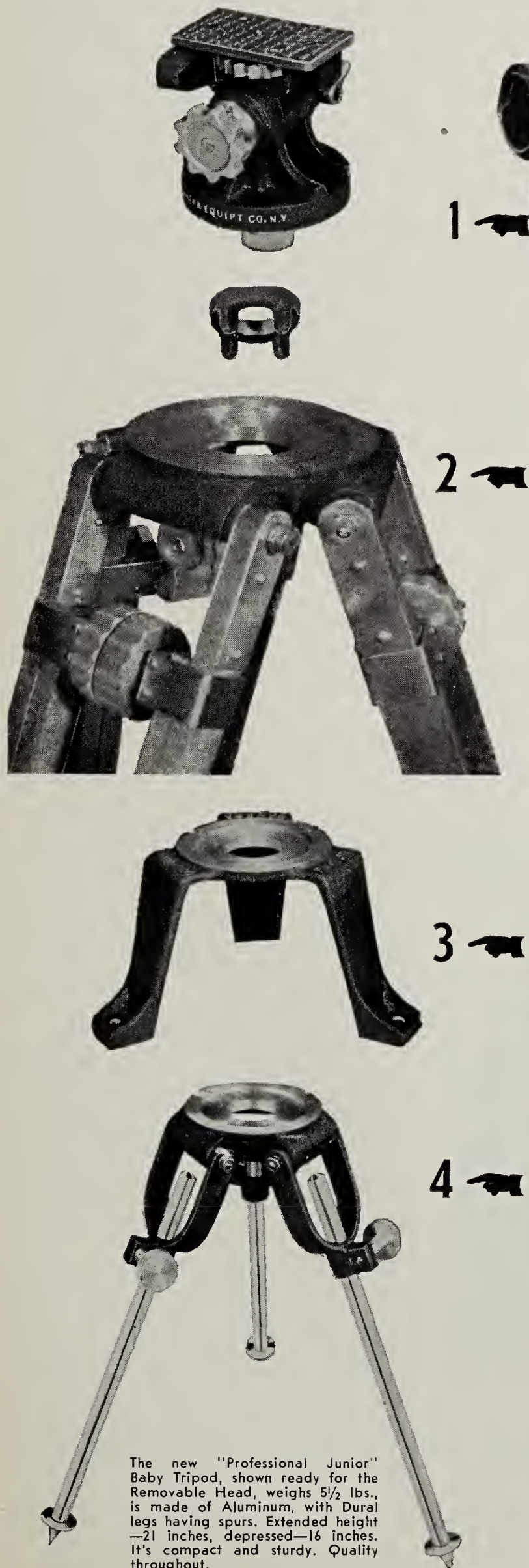
and attended Brockport Normal and Livonia high school prior to entering Syracuse University in 1901. Upon graduating from the latter with an A. B. degree, he taught physics in high schools for a few years prior to joining Bausch & Lomb in 1908. As a member of the Scientific Bureau of the company, which he headed for the past two decades, his accomplishments were many in contributing to the optical advancement of motion picture technique.

In 1933, he was awarded an honorary degree of doctor of science by University of Rochester; and the same honor was bestowed on him by Syracuse University in 1942. During the early stages of World War II, he worked closely with Maj. Gen. George W. Goddard, Army Air Corps photographic section, on an aerial lens designed to take 18 inch negatives that made possible the mapping of enemy terrain and entrenchments from photos snapped at heights of four miles.

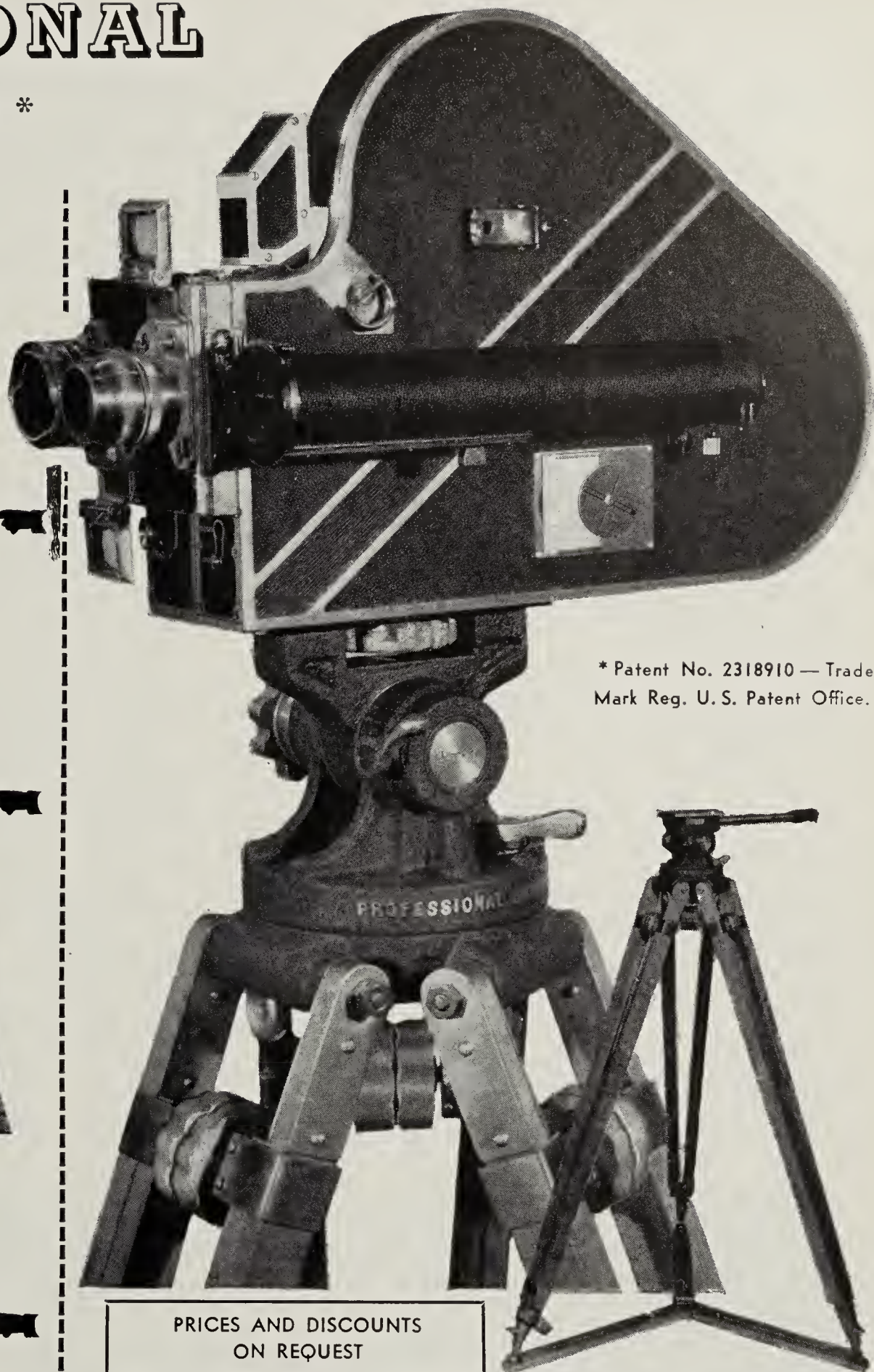
For many years, Dr. Rayton was an associate member of American Society of Cinematographers; and was a Fellow Member of Society of Motion Picture Engineers. Other memberships included the Optical Society of America, American Association for the Advancement of Science, Photographic Society, and American Society of Photogrammetry. He is survived by his widow, a son and a daughter.

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Adaptability: here are illustrated (1) the friction type removable "Professional Junior" tripod head that may be affixed to (2) the Standard Tripod Legs Base and (3) the "Hi-Hat" (Low Base Adaptor) and (4) the new all-metal "Baby" tripod by simply fastening the finger-grip head fastening nut that is shown under it. Note the positive-locking, fluted, height-adjustment knobs and tie-down rings of the Standard Tripod Base which is standing on a Triangle. Triangles prevent slipping on or marring of polished floors.

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Cinema Workshop

(Continued from Page 444)

trast between the light and shade areas of the composition. This contrast is especially unflattering in close-ups of persons. In order to soften the harsh effect and fill in the shadow areas, we use simple reflectors that can be easily constructed by pasting squares of silver or gold foil onto plywood flats.

Correctly used, these reflectors impart a professional *finish* to the film—but if over-used, they may cancel out shadow areas almost completely, creating a flat and undramatic result. Be careful to use your reflectors intelligently, since it takes a certain amount of soft shadow to give a pleasant modeling to faces.

There are two kinds of reflector surfaces: the hard variety (silver), and the soft (gold). Soft reflectors give a nice smooth quality in close-ups, but should not be used in color cinematography, since they reflect an unusually warm color of light.

Closely allied to reflectors in usefulness to the cameraman are *scrims* of gauze netting which are helpful in diffusing sunlight when it falls too harshly upon faces in close-ups. These scrims, either single or double depending upon the amount of diffusion desired, are suspended out of camera range, between the sun and the subject, and function to break up and soften the harsh direct rays of the sun.

Often unwanted reflections from some surface such as a white wall, etc., may cause your subject to squint. This glare can be softened in many cases by placing a *gobo* (black square of wood or ply-

board) between the subject and the offending surface.

For diffusing close-ups a diffusion disc is very helpful—but a layer or two of gauze net placed before the lens will give almost the same effect. In using net as a diffuser, be careful that it is well-shielded, as sunlight falling directly upon it will cause flare. Also, be sure that the net is placed as close to the lens as possible; otherwise the criss-cross pattern of the cloth may come into focus just sharply enough to be noticeable.

Motion Picture Composition

Volumes can, and perhaps *should*, be written on the subject of composition in motion pictures. We cannot hope in this small space to discuss the subject at great length, but feel it necessary to present a few basic rules for making your screen compositions more effective.

Firstly, we must not think of cinema composition as the static thing it is in still photography. Screen composition is fluid and ever-changing; therefore, it requires a more precise, more versatile kind of planning in order to insure visual patterns that will remain interesting throughout the action of an entire sequence.

But aside from adding interest to the visual presentation of the story, the function of effective composition is to lead the eye directly to the most important point in the scene. For this reason, action should be so staged that the lines of the setting in which it is played will lead to the areas of greatest dramatic importance.

A *closed* composition is one which is framed on all sides (by trees, etc.) in

such a way as to prevent the eye from straying from the focal point of action. This kind of foreground framing, besides aiding dramatically is also effective pictorially in lending depth to the scene.

In the case of a *pan* or *dolly* shot, always plan in advance your separate compositions for each camera *stop*, then plot in the camera movement that will tie these separate compositions together. As for movement within the scene, it is a basic tenet that lines of action leading straight across the screen are less potent dramatically than those originating near one of the corners of the frame and leading into it diagonally. A line of action or static design leading into the pattern from the lower left hand corner of the screen is considered to be the strongest single line of composition.

Similarly, it is undramatic to divide your frame in half either horizontally or vertically by any compositional line (such as a tree or the horizon). By mentally dividing your scene into thirds both ways, and placing your focal point of interest at any of the intersections of these imaginary lines, you will evolve a composition that is much more effective than one that is divided into halves.

Shooting Snow Scenes

In shooting snow exteriors, the primary problem is to cut down the extreme brightness contrast ratio between the white snow and the shadow areas. This problem of reducing harsh contrast also applies to desert and seascapes.

In the case of snow in bright sunlight, the brightness contrast of the scene is tremendous. Add to this the substantial amount of light reflected from the white surface, and you have a good deal of light to contend with.

Various filters and filter combinations have been worked out to soften snow scenes so that they do not "burn up" on the screen. We shall discuss a few of these filters and their effects.

3 N 5 (a combination of Aero 1 and 50% Neutral Density filters) gives a light color correctness to the sky without increasing contrast of the remainder of the scene.

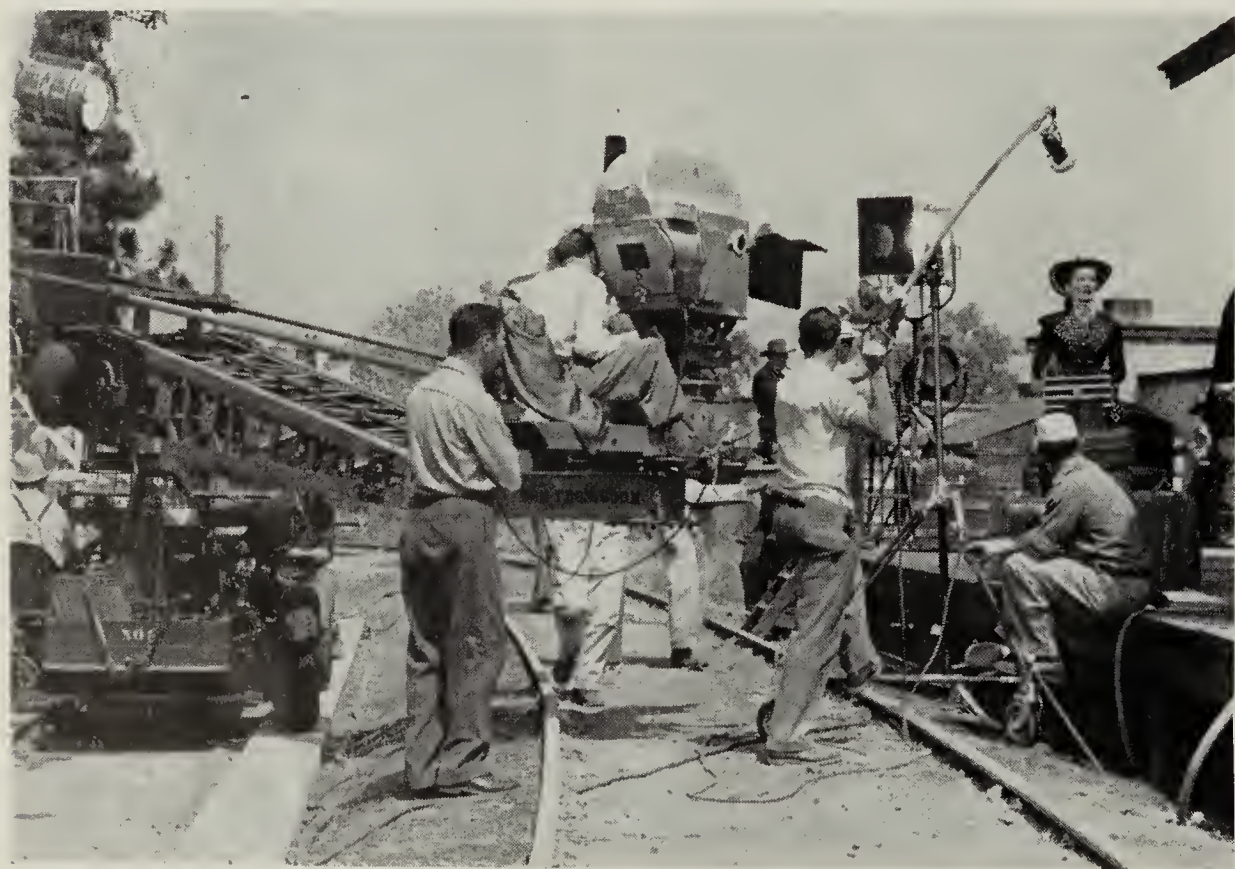
5 N 5 (a combination of Aero 2 and 50% Neutral Density filters)—gives medium sky correction without excessive contrast. It has the same basic action as 3 N 5, but with added detail. It is used to soften strong glare and contrast in snow scenes having heavy shadows.

X2 and 23A filters super-imposed. This combination darkens skies and produces a pleasant softness that cuts contrast between snow and shadow.

If any errors must be made in exposing snow scenes, they should preferably be made toward the underexposed side of the scale.

We have discussed the basic problems of exterior shooting. We are now ready to go into detail on the subject of interior lighting.

NEXT ISSUE: PART VII—*Standard Set Lighting*.



TRAVELLING SHOT. Katharine Hepburn takes a walk along railroad station platform for scene in Metro-Goldwyn-Mayer's "Sea of Grass." Director of Cinematography Harry Stradling, A.S.C. (standing in left foreground behind camera), closely follows the action. Camera boom on travelling dolly, booster lights and microphone setup typifies this type of shot.

THE problems encountered in the shooting of an exterior motion picture sequence arise, paradoxically enough, from the rather over-abundant generosity of Nature. That is to say, our main concern in outdoor filming is not so much to secure the basically necessary photographic elements (light, backgrounds, etc.), but to *control* these elements that have been so lavishly placed at our disposal.

In modern professional practice, a substantial amount of exterior sequences are shot inside sound stages because of the firmer control the technician can exercise over the mechanical factors of photography. However, for the semi-professional producer, the outdoors offers an infinite number of perfect photographic backgrounds, a strong and constant source of light, and infinite room in which to stage action and place equipment.

Ways and means of controlling these elements are basic, and once learned, can be followed consistently with good results. Taking for granted that the reader knows these fundamental techniques, we shall discuss some of the finer points of photography necessary to the filming of exterior sequences.

The Basis of Exposure

Granted that there are many factors that influence the overall excellence of exterior cinematography, it can be said with emphasis that the most important single influence on general quality is *correct exposure*. Even with present-day wide-latitude emulsions and modern methods of processing geared to compensate for faulty exposure, the fact remains that a perfect scene results only when the exposure has been calculated "on the nose."

In order to achieve this result, the cameraman must consider, not only the mechanical requirements of his scene, but *the particular kind of processing which will be given his film after exposure*. For this reason, he will be wise to run tests at standard exposures and send them off to the lab for processing in order to find out what is the standard of development for that particular lab. No two laboratories process film in exactly the same way, and the cameraman must make inquiries in order to adjust his exposure techniques (as well as his own evaluation of the film's speed) to the particular lab that is processing his film.

A good many novice cameramen have asked the question: "What do you expose for in the scene?"—and they seem intent upon finding a rule to follow. Obviously, no one rule could possibly cover every situation, but in general we can say that *you expose for the most important element in your scene*. Another rule that is an old standby of cameramen is: *Expose for your shadows and let the highlights take care of themselves*.

Actually, neither of these rules of thumb should be taken too literally—nor

do they apply in every case. Your basic problem (within the latitude of the film) is to expose in such a way that the light areas are not *overexposed* and the dark areas are not *underexposed*. This depends partially on careful selection of your film emulsion, but even more so upon your control of the amount of light that reaches the film.

Very often, in using high-speed films, you will find that even at the smallest lens opening the scene will be overexposed. In this case, there are two ways of cutting down your exposure. One way is to use *neutral density filters*, flats of optically ground grey glass that absorb all colors in equal relative proportion. The other alternative is to cut down your shutter angle. Most 35mm. professional cameras and a few 16mm. jobs (such as the Cine Kodak Special and the Bolex) have variable shutters to accomplish this.

Using the Exposure Meter

There is more to using an exposure meter than merely pointing it at the scene to be filmed. Many cameramen do just that, and then wonder why their exposure is so far off.

Firstly, you must decide what elements of the scene you are principally exposing for. When people appear in the composition, obviously you must be mainly concerned with the rendition of skin tones. Therefore, your principal reading should be taken just a few inches from the character's face. Other readings, taken from camera position, etc., should be balanced to favor this principal reading.

Secondly, a meter usually "sees" a wider angle than that encompassed by the camera lens. Therefore, it is necessary to take most of your readings from a spot closer in than camera position.

On this same subject, it should be pointed out that skies are especially misleading when you are taking a reading. They are usually overly-bright in relation to the rest of the scene, and will tend to boost your reading higher than it should be for exposing the actual subject. For this reason, it is wise to tilt your meter downward a bit (at about a 30° angle) in order that your reading will cover more foreground and less sky background.

Every cameraman knows how important it is to use a good sunshade over his lens in order to prevent strong light from causing *flare*. The element of an exposure meter is similarly affected when scattered rays of light fall upon its unshaded surface, causing a deceptively bright reading of the scene. Therefore it is wise to shade your meter element either with your hand, or with a home-made cardboard shade in order to achieve a more faithful reading.

The Use of Filters

Filters have three primary purposes: *a. To correct the rendition of certain colors, b. To cut down the amount of light reaching the film, and c. To produce special effects*. In any event, filters should not be used just for the sake of using them, but always with a specific purpose in mind.

Firstly, we use filters to *correct* certain color tones, notably to darken skies and water and thus keep them from "burning up" the composition. Yellow and orange filters, used in this way, add a certain richness to exterior sequences and provide a pictorial contrast between flesh tones and the sky. Red filters, overcorrecting blue tones, darken the sky dramatically, but must be used very carefully, as they tend to "wash out" skin tones unless special make-up is used.

The second function, that of *cutting down exposure*, is achieved, as we have pointed out, through the use of neutral density filters. These filters are available in varying densities from 25% to 200%. They also tend to flatten out contrast to a greater or lesser degree depending upon the density of filter used.

The third function of filters, that of producing *special effects*, is used in simulating night effects outdoors in daylight, and in fantasy films for creating weird dream sequences, etc. For night effects, the red filters (23A, 25A, 29F, 70, and 72) are most widely used. For softer night effects in sunlight, a combination of 50B with 23A is quite effective. For the fantasy effects mentioned 25A, 29F, 70, 72, and 88A filters are used with infra-red film.

The Use of Reflectors

In outdoor filming, especially in bright sunlight, there is a naturally harsh con-

(Continued on Page 446)

The Cinema Workshop

(For Semi-Professional and Amateur Production)

6. Exterior Shooting

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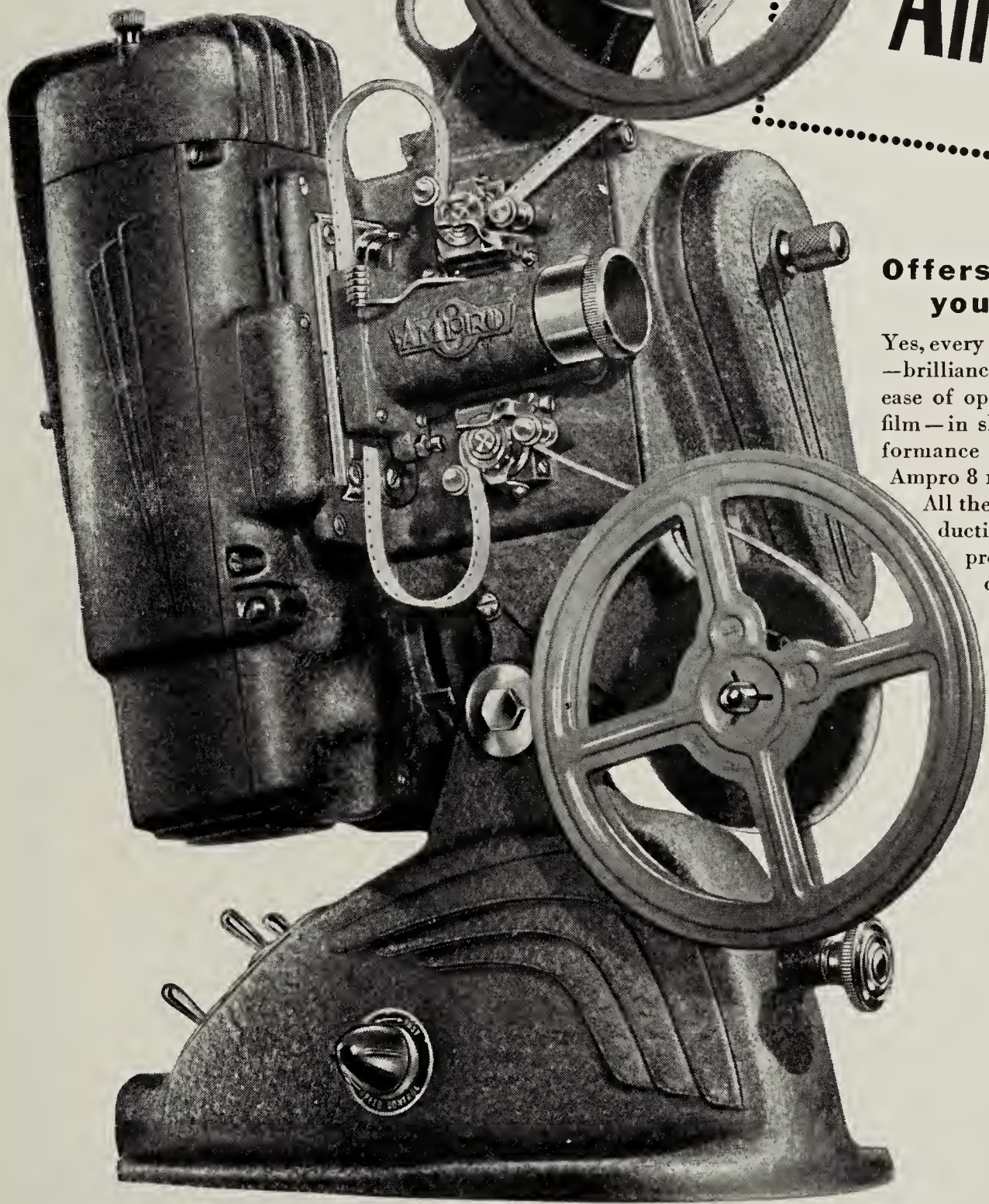
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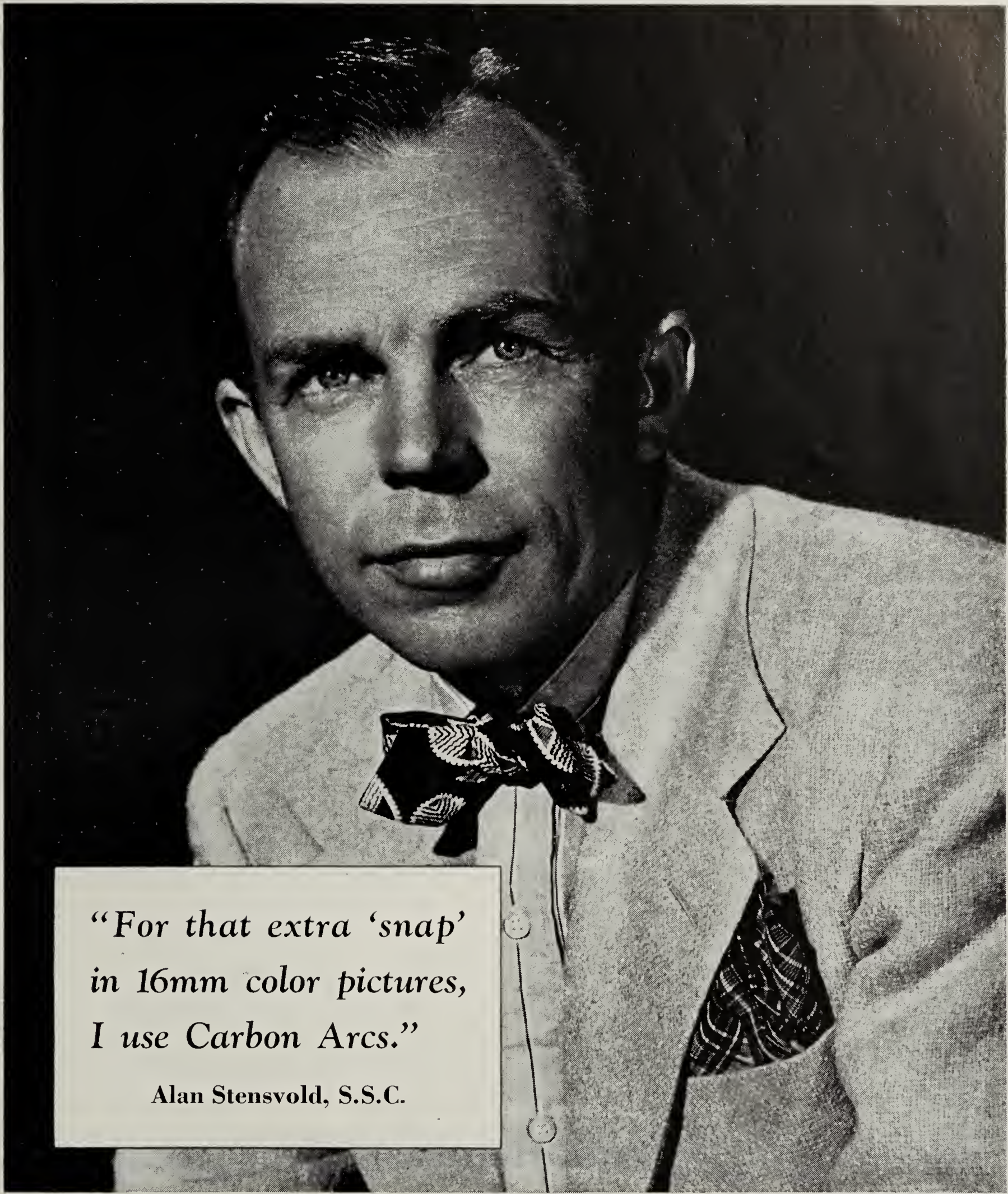
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AMONG THE MOVIE CLUBS

Chicago Cinematographers

Chicago Cinematographers resumed regular monthly dinner meetings on evening of October 1st at Chicago Union Station. After a turkey dinner, a 16mm. Ansco color travelogue, "West On Thirty," by member R. C. Snyder, was shown. Al Rus took charge of the meeting as president for the coming year; with Arthur Josephson functioning as vice president, and Earnest M. Lundgren as secretary-treasurer. New board members elected in June for two year terms include Robert Pennypacker and Jerome S. Franks.

For the November 5th meeting, Art Silha presented his 8mm. color subject of 50 minutes, "Just Browsing Around."

Seattle Amateur

Seattle Amateur Movie Club has completed plans for a club production to be made under title of "Let's Make A Movie." With story plans set, Anchor Jensen was voted to function as producer, with Charles Grinnell in charge of photography. Aubrey Widson and Ralph Lund will assist the director, while Erwin Miller and Walter Mankowski will function as assistants on the camera. Clyde Huntley was selected to handle the starring role in the workshop production, which will be completed in time for the annual Salon Show in February.

Meeting of November 12th featured a repeat showing of "Meshes of the Afternoon," and balance of program consisted of screening of member films for constructive criticism.

Alhambra La Casa

John H. Clay was chairman of the November 18th meeting of La Casa Movie Club of Alhambra, Calif., which was held in YMCA building. Continuance of the 1946 vacation pictures by members highlighted the film program in 16mm. Clay presented his "Grand Tetons and Yellowstone," Irwin K. Kendall exhibited his films taken in San Diego, and C. K. LeFiell showed motion picture results of his trip through Central and South America.

St. Louis Amateur

Actual demonstration of use of lights for interior lighting was presented at the November 12th meeting of Amateur Motion Picture Club of St. Louis, held in the Roosevelt hotel. Lights were set up in different ways, and then films were projected to show the specific results. Film program of the evening included: "Hawaii," by Ira Hicks, and F. E. Gunnell's 1945 Award winner, "While the Earth Remaineth."

New York Metropolitan

An extensive film program entertained members of Metropolitan Motion Picture Club of New York City at November 21st meeting held in hotel Pennsylvania Pictures comprised: "New Song of the Mesa," by Edmund Shaw; "Song of the Open Road" by Charles H. Benjamin; "El Rancho," by Mrs. Mary Jessop; "Spring Is Here," by Harry Groedel; and "Pointless Foray," by George Mesaros. All presentations were in 16mm. kodachrome.

Titling and various ways to make same, was the subject of supplemental meeting held on November 6th. Metropolitan announces that its December 19th meeting has been set aside for the club's annual Christmas party—a big event for members—at which a fine program of films will be shown.

Los Angeles Cinema

Mrs. E. B. Kellam featured the November 4th meeting of the Los Angeles Cinema Club with her presentation of her personally-made films of a South American tour covering period of three months. Charles J. Naroma showed the best slides selected by the Hollywood Color Slide group; and Dr. Irwin A. Moon presented his "God of Creation," a splendid combination of animation and unusual photography for a trip into the astronomical universe.

Annual meeting of Los Angeles Cinema has been set for December 9th, and entries for the annual contest closed on November 21st. Judges for the event include: Ted Phillips, S.S.C., Edwin Schallert, Herbert E. Farmer, Karl Freund, A.S.C., Lorenzo Del Riccio, and James H. Mitchell.

San Francisco Cinema

Program chairman Larry Dugan presented two fine films at the November 19th meeting of Cinema Club of San Francisco, held at the Women's City Club; where usual club dinner preceded the session. Films shown were "Rhumba," comedy in 8mm. kodachrome by Mr. and Mrs. R. E. Haney; and Leon Gagne's "North Coast Highways," 16mm. kodachrome travelogue taken on trip from San Francisco to Fort Bragg. Annual dinner meeting will be held on December 17th, according to club announcement.

Philadelphia Cinema

November meeting of Philadelphia Cinema Club was held on the 12th in the Little Theatre of Franklin Institute. Mr. F. Carroll Beyer of Ansco presented a demonstration of Ansco color, including discussion of proper exposure and home processing of the film.

Los Angeles Night

J. A. Hornaday was elected president of the Los Angeles Eight MM. Club at annual meeting held in Bell & Howell auditorium, November 12th. Other officers to function during the coming year include: Bion B. Vogel, vice-president; Harold E. McEvers, secretary; and Robert C. Beazell, treasurer. Film program for the evening included: "Christmas at Home," by Merle and Leslie Williams, a recent national award winner; and "America the Beautiful," 16mm. kodachrome produced by Warner Brothers for the U. S. Treasury Department.

Annual banquet and showings of contest films will be held at Scully's Cafe on evening of December 7th.

San Francisco Westwood

Regular meeting of Westwood Movie Club of San Francisco was held at St. Francis Community Hall on October 25th, with member Walter C. Clifford presenting his 16mm. color film, "Travelogue of Feather River to Grass Valley." Also shown was "Amateurina," 16mm. color comedy produced by Indianapolis Amateur Movie Club.

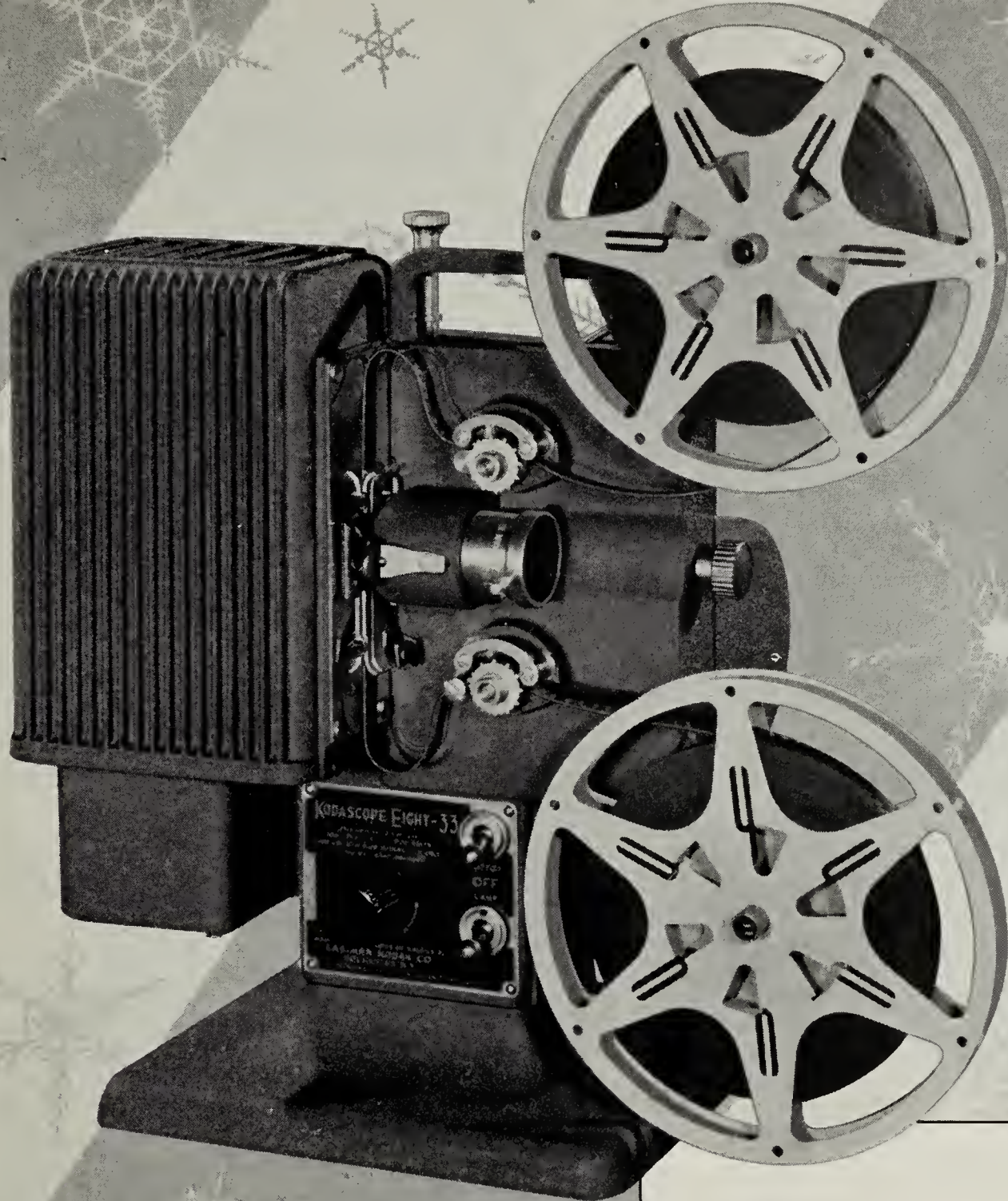
Entries in the club's annual contest for both 16mm. and 8mm. subjects provided highlights of the meeting held on November 29th. Winners will be announced in the next issue.

Milwaukee Amateur

Annual film exhibitions for contest prizes were held at the November 13th and 27th meetings of Amateur Movie Society of Milwaukee; with the 8mm. entries judged on the former date, and the 16s holding the screen on the 27th. Judges were Charles C. Kruse and Carl F. Forbes; with Al Walker functioning as contest chairman. Annual election will be held on January 8th, and nominating committee consisting of Naomi Gauger, William Rheingans, and Walter Chappelle is currently engaged in selecting two candidates for each office.

Utah Cine Club

Demonstration of a movie projector capable of showing both 8 and 16mm. prints, was demonstrated by B. Martin Storm at the November 20th meeting of Utah Cine Arts Club of Salt Lake City. Film program included "A Hike Up Bell Canyon," by L. C. Layton; Leo Heffernan's "Hail British Columbia," 1941 Hiram Percy Maxim Award winner loaned by ACL; and showings of unfinished pictures or clips—maximum of 50 feet of 8mm. and 100 feet of 16mm.—provided by members. Club bulletin announces that members LeRoy Hansen and Al Londema were award winners in a recent national movie contest.

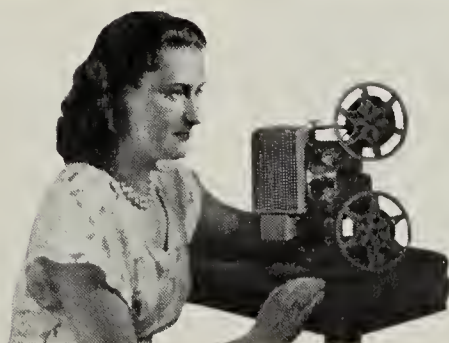


KODASCOPE EIGHT-33

HERE'S a splendid Christmas present for the 8mm. movie enthusiast. Low in cost, high in quality, Kodascope Eight-33 promises many an evening of brilliant home movie entertainment. It's equipped with a powerful 500-watt lamp and fast $f/2$ lens . . . will "take" a 300- or 400-watt lamp, if less illumination is adequate. Centralized controls and finger-tip-handly adjustment knobs make operation amazingly easy. And this projector is available right now at many Kodak dealers'!

Eastman Kodak Company, Rochester 4, N. Y.

SEE YOUR KODAK DEALER BEFORE CHRISTMAS



Kodak

Pioneer Still Devising Aerial Movie Short-Cuts



In this 1927 photo, veteran aerial cinematographer, Elmer Dyer, A.S.C., is shown with the dual-camera setup he used in filming air sequences for Howard Hughes' "Hell's Angels." Two Bell & Howell professional 35mm. cameras were employed—one with short focus lens for long shots, the other with telephoto lens for closeups.



Dyer is shown above with his specially-rigged Bell & Howell 35mm. professional camera during recent shooting of aerial sequences for Columbia Pictures' "Gallant Journey." Notice the 1,000-foot magazine, used in the open cockpit for the first time by Dyer.

There are good reasons for the authentic excitement packed into aerial photographic sequences in Columbia Pictures' recent release "Gallant Journey." Among the most important are Camera-man Elmer Dyer, A.S.C., and his custom-rigged Bell & Howell 35mm. Professional camera. In filming some of the action in this feature, Dyer made aerial photographic history by successfully using a 1000-ft. film magazine in an open cockpit for the first time. Special steel bracing was required for this adaptation, which permitted unusually long shooting

sessions with a single loading of film.

A major in the Army Air Forces during the war, Dyer saw service in Europe with the 8th Air Force, and also had a hand in training several hundred Army aerial photographers in California.

With some 10,000 flying hours in his log-book, Dyer is a pioneer in open-cockpit movie technique. He is remembered in the industry for his daring work in filming "Hell's Angels" for Howard Hughes in 1927. At that time he had two Bell & Howell Professional cameras mounted in tandem in a biplane, one

fitted with a short-focus lens for long shots, the other equipped with a telephoto for simulated closeups. This arrangement permitted the completion of two scenes during a single flight.

Currently, Dyer is employing a similar tandem setup, consisting of an Eyemo 35mm. and a Filmo 70-F 16mm. camera, in filming a series of short subjects entitled "American Air Trails." The dual camera mounting enables him to shoot 35mm. black-and-white and 16mm. color footage simultaneously.

Contributors Honored

"March of Progress," written and directed by W. G. C. Bosco, whose Aces of the Camera is a popular feature of this magazine, and photographed by Robert Pittack, A.S.C., has been selected by the Motion Picture Division of the Library of Congress as one of the best pictures in its class produced in 1945.

Prints of this black-and-white subject, which has as its theme the influence of transportation on the changing pattern of life in the San Francisco Bay area, will be preserved in the permanent collection of the Library.

Lightman's Article in Colliers

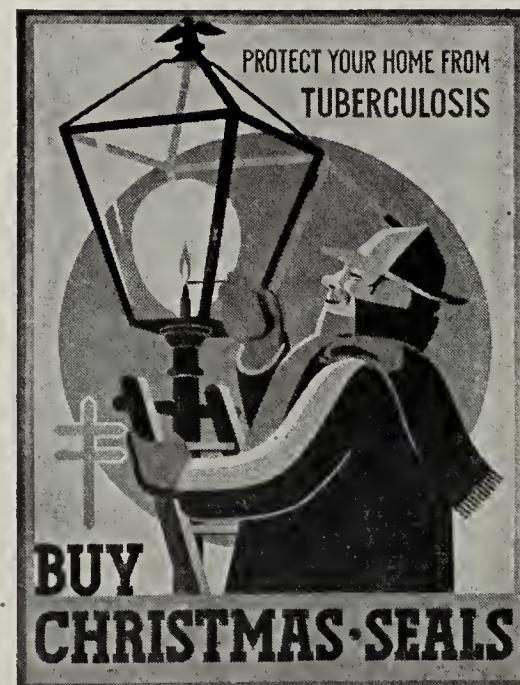
Herb Lightman, whose critical and information on the use of subjective photographic techniques are regular features of American Cinematographer, had by-line article, "Movie Revolution" published in November 9th issue of Colliers. This gave the public some inside information on the use of subjective camera technique by Robert Montgomery and Director of Photography Paul Vogel, A.S.C. for M-G-M's "Lady in the Lake."

South African Agency

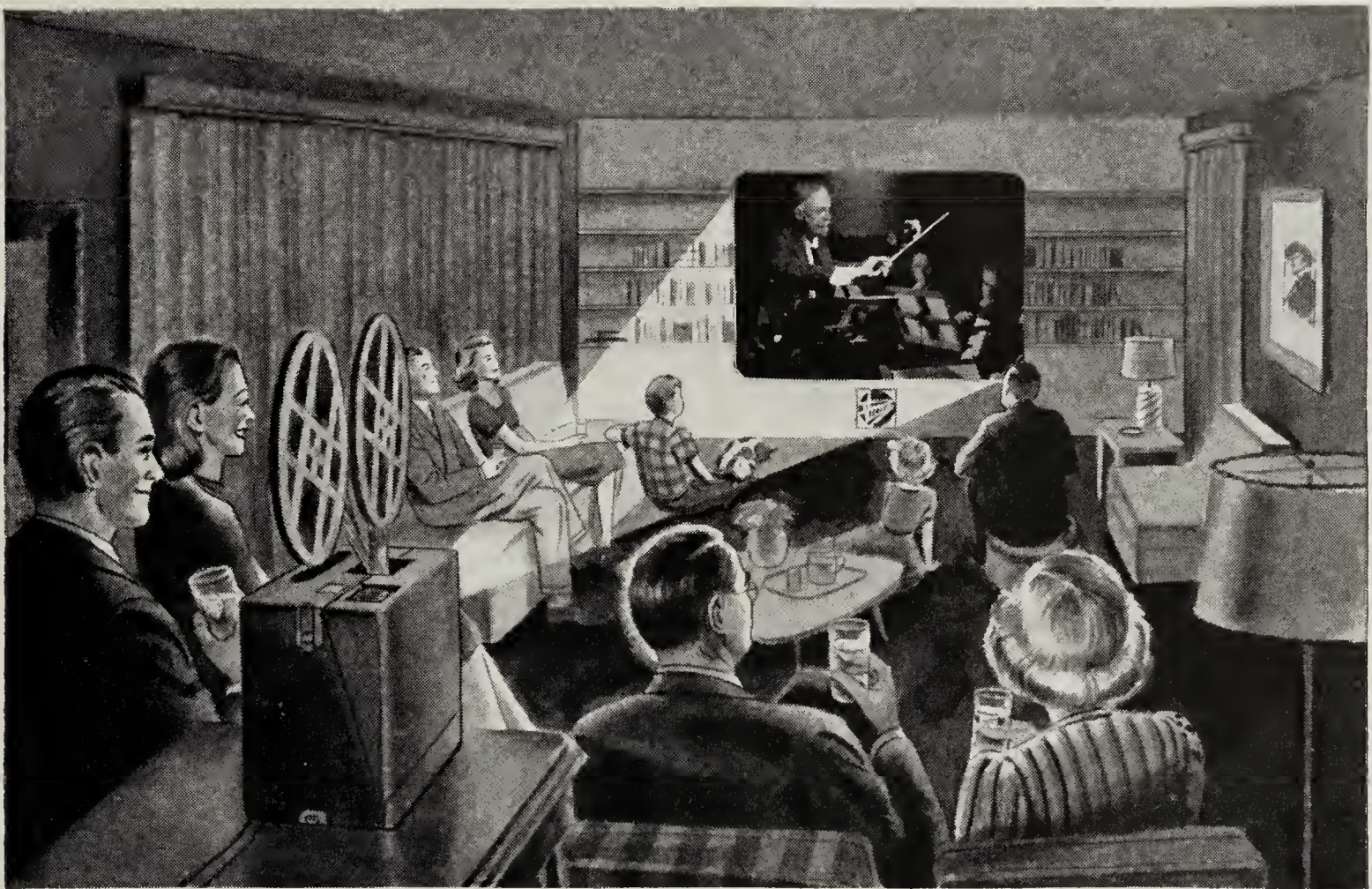
Eric Horvitch of Photo Agencies of Southern Africa, has acquired exclusive distribution for the Professional Junior tripods of Camera Equipment Company for Union of South Africa and surrounding territories.



W. G. C. BOSCO



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films will have finest picture brilliance, truest sound fidelity with a *Victor Animatophone*, the choice of educators, industrialists, and Government agencies. It’s the choice, too, of smart amateurs to show their own homemade movies. Those who know and use the *Victor Animatophone* readily vouch for its superiority. Ask for a demonstration!



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pronto. But it took us the rest of the afternoon to get the natives down from the rafters and the top of the sets.

"We certainly have a cinch now with optical printers and other facilities on production. But in those days, you cranked the picture by hand, making all fades, overlaps and double exposures right in the camera.

"In one serial scene, we wanted a herd of tigers to run to the far side of a stockade where the natives were throwing a man in as a sacrifice. We only had eight tigers, so we made three exposures below to produce total of 24 tigers. But they all had to run on count to reach the designated spot simultaneously, and we finally accomplished the desired shot. In the same manner, we tripled the 40 native extras to a mob of 120.

Earliest Experiments in Soundfilms

"In 1925, Jack Warner sent me to New York to do the initial experimenting on sound motion pictures with engineers of Bell Laboratories, and I worked with Stanley S. Watkins and his associates from the Laboratories. They worked on the recording end, while I handled the photography for the tests. Of course, at that time, everything was recorded on wax. When you once started on a record there was no such thing as stopping; you had to make the entire 10 minute record on one wax.

"At first, the motors of camera and sound were not synchronized as they are today; each had a throboscope disc on the shaft and the camera assistant and assistant recorder had to watch the disc all through the take, and if it started to hunt forward or back, one or the other would have to push the handle of a rheostat backward or forward in order to bring the motors back together again. Of course, they would never be exactly together all of the time, but in those days you could be out a little and the audience would not complain.

"When I first started, we only used one camera. Everything was a long shot. So one day I suggested to Stanley Watkins that—as we were synchronizing one camera with the recorder—why not hook up two so that the sound camera could get a close or medium shot. The tryout was satisfactory, and that was the beginning of multiple cameras on the set.

"Then we shortly were using three cameras on everything; one for the long, or master, shot; one for medium shot; and the other with long focal lenses for closeups. As a rule, I used to have the camera with the long 3-4-5-6 inch lenses. On occasions I would change lenses as many as 15 or 20 times in order to get different closeup and medium shots in a 10 minute number. Of course, every time I changed from one lens to another, a few frames of the picture would be lost,

but as the long shot camera was going all the time, we could always cut back to it and keep everything in synk.

Initial Sweet Boxes

"The expression of 'sweating it out' must have originated back in the old Manhattan Opera House, New York. When a number was started, the cameraman and his assistant were locked up in a sound proof box which was termed the camera booth. We stayed in there for 10 minute stretches with no fresh air except what was there when the door was closed, and that was soon used up. I often wonder what could have happened if a fire started. The door was locked from the outside, which necessitated someone opening it up at the finish of every take.

First WB Sound Pictures Shown

August 6, 1926 was the big night; the first showing of Warner Brothers' sound picture. It was a white tie and tail affair, with all the Warner brothers there, but I think the happiest was the late Sam Warner, because the entire project was his particular pet and he had worked all through it with us. In fact, the company had taken one of the greatest gambles of all time in motion picture history—but it paid off handsomely. It was an eventful night. We had made a number of shorts to supplement the orchestra - backgrounded

'Don Juan,' so the shorts had to do the talking and singing. There was an opening speech by Will Hays, Martinelli in an operatic selection, Ray Smeck and his banjo, Anna Case, and the Cansinos in a Spanish Fiesta reel.

"We made shorts for about another year in New York and then closed down; at which time I transferred back to Hollywood where Warners equipped a small stage for sound production and started to make shorts again. We had had so much trouble with arc lights in New York on account of the noise, that we decided to attempt the use of all incandescent—or inkie—light. With maximum of 1,000 watt lamps to work with, we used all we could get, but had nothing for spot lights. Frank Murphy constructed some stands with mirror reflectors for the 1,000 watters, and then took all the flood light spots that were being used to light up the front of the studio for improvised spots. That was the start of inkie lights for picture production.

"After we got a few lights together, the studio held regular classes in inkie light on a special set, with all studio motion picture photographers invited. The different cameramen would take turns lighting the set, and the film would be run off at the next meeting.

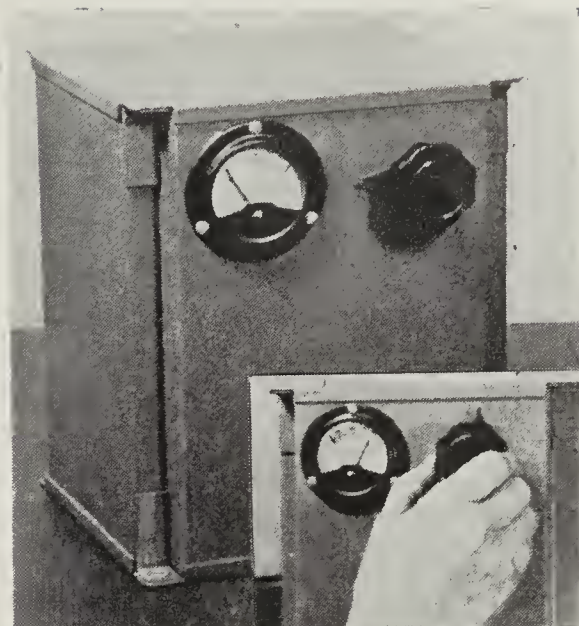
"At the time, we made some sound sequences in full length pictures such as

'The Jazz Singer,' 'Lion and the Mouse,' 'Singing Fool,' 'The Barker,' and others. Shortly after, a short with Cullen Landis, Helene Costello, and Gene Pallette was produced by Bryan Foy. It looked so good, he decided to expand it into a two reeler but sequences kept adding until he wound up with the first all-talker, 'Lights of New York,' to again make motion picture history.

Coast to Coast

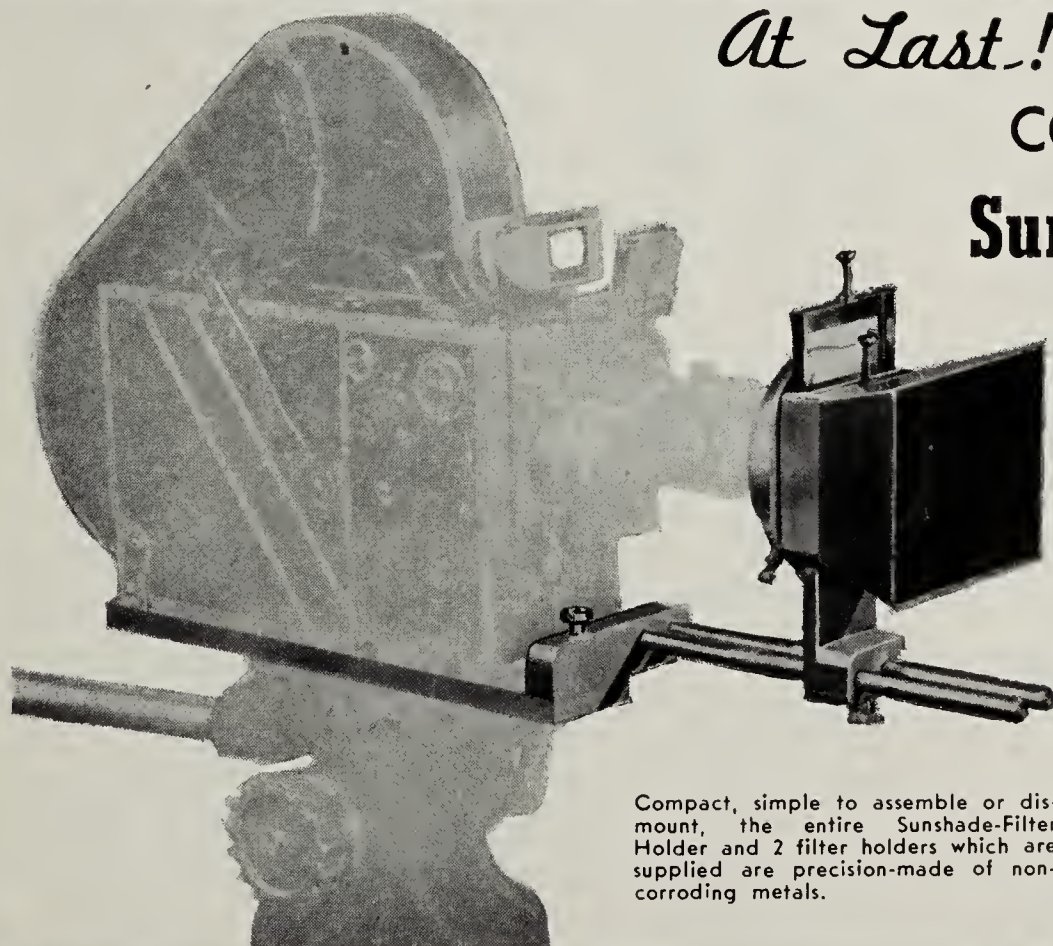
Early in 1928, production was resumed in the New York studios, so I was shipped east for a seven year stretch, until returning to the coast in 1935 to associate with the special effects department. Last spring, while in New York making some background keys for 'The Voice of the Turtle,' I again met Stanley Watkins. During our reminiscences, he remembered that he had stored the original shorts tests in a cabinet on top of the Bell Telephone building. So we went up and easily found them where they had originally been stored. The amazing part of it was that they went through the projector after all these years—had not shrunk and were not brittle. But the showing brought back happy memories—of nearly 30 years with one company and the numerous new practices which had to be devised in motion picture photography, special effects and process, and soundfilm procedure to maintain motion pictures as the greatest form of entertainment."

Controlled Voltage for 16mm. Projectors



The Victor Animatograph Corporation of Davenport, Iowa, is offering a new Voltage Regulator with which the power supply for 16mm projectors can be held to the correct, and uniform, level.

The new Victor Voltage Regulator eliminates difficulties many times confronting 16mm projector operators in rural or outlying urban districts where power supply is often inadequate or irregular.



Compact, simple to assemble or dismount, the entire Sunshade-Filter Holder and 2 filter holders which are supplied are precision-made of non-corroding metals.

At Last! — A Professional Type COMBINATION Sunshade & Filter Holder

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Designed for use with all popular types of 16mm cameras, the "Professional Junior" Sunshade & Filter Holder holds two 2" square glass filters, also a 2½" round Pola Screen with handle which can be rotated for correct polarization. By using our "Professional Junior" Sunshade & Filter Holder you will not require filters of various sizes as the 2" square filter will cover all lenses from 15mm to 6" telephoto.

The Sunshade-Filter Holder is supported by a double arm bracket. This attaches to a plate which you can fasten on to the base of your camera where it can remain at all times if you desire. The Sunshade-Filter Holder is demountable into 3 small units which, when not being used, fit into your camera carrying case.

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"The Killers"

(Continued from Page 431)

static camera and let our players work toward it."

Siodmak is a director who likes to convey visual ideas in a unique way. He worked closely with Woody Bredell, A.S.C., striving to inject psychological undertones into certain key sequences of the film. There is one scene, for instance, in which we see a group of gangsters plotting a hold-up. Here the key light was placed unusually high, with no *fill* illumination, so that the players eyes went dark in such a way that the shadows suggested masks.

For another sequence in which the hero is shown in a prison cell, the lighting was purposely soft and church-like to accentuate the innocence of the character. In a series of scenes that took place in the morgue, the players were silhouetted against a glaring white wall, the striking illumination of which conveyed a kind of "butcher shop" atmosphere.

Perhaps the most unusual bit of camera handling in the whole picture is the hold-up sequence, filmed entirely in one take, utilizing 18 *camera stops* and upwards of 60 changes of focus. The news-reel quality of the camera approach,

plus the realistic confusion of the factory policemen portrayed, gave this sequence a documentary quality.

A Cameraman's Picture

For cinematographer Bredell, "The Killers" was, at the same time, a field day and a challenge. He wanted his treatment to be dramatic, yet so realistic that it would go unnoticed as a mechanical device. For this reason, he ruled out anything that smacked of *beautiful* photography and worked entirely for realistic effects.

Especially *apropo* was his lighting treatment, a style which he calls *out-of-balance* lighting, which is characteristic by sharp contrast between crystal white and velvet black. Purposely discarding fill illumination he managed to avoid wishy-washy grey halftones.

"The lighting set-ups were kept quite simple," Bredell points out. "It is a temptation for a cameraman to become spoiled because he is given too much equipment with which to work, and he feels that he must use all of it. Similarly, if you have 18 electricians on a set, each one wants to turn his light on."

Naturally, the kind of realistic lighting used was not especially flattering to the players. There were no ethereally diffused close-ups, no softly lit glamour shots. Instead, eye shadows

were allowed to go dark, and side-lighting divided faces into black and white halves. There was a bit of vain grumbling in the projection room when the first *dailies* were shown. "The audience can't see my eyes there," one actor was heard to remark. "One side of my face is dark," wailed an ingenue.

But the technicians continued to sacrifice the vanity of the actors in favor of the realistic, down-to-earth treatment that made the audience feel that they were watching the actions of real people. Those actors who could take that kind of lighting took it—and the rest went along for the ride. Soon, however, the players fell in with the enthusiastic mood of the technicians and forgot all about their photographic complaints.

"We had no elaborate sets with which to achieve unusual effects," Bredell observes. "Therefore, we had to get our interesting visual patterns with light and shadow. We tried to use *story* photography rather than stereotyped motion picture or star photography. I hope that not too many people specifically noticed the photography in 'The Killers,' because motion picture camerawork is only good when it goes unnoticed."

The Team Pulls Together

Work on the film went along in an in-
(Continued on Page 463)

NEW ELECTRONE-TONE 16mm. RECORDER and PRINTER WITH TONE-FIDELITY THAT EXCELS

Technical Data Regarding the Recording System

Audio frequencies of 10,000 or more cycles per second can be recorded with this equipment. The basic recording unit consists of a recording head, recording galvanometer and film magazine, with motor drive, the amplifier equipment and the necessary indicating and metering devices. A patented mechanism permits the recording of conventional 16 mm. single-sprocket motion picture film.

The recording unit, which can also be used to print unlimited quantities of the master recording, is small and compact and can be considered portable for certain specific operations. Weight is less than 100 pounds.

Printing is accomplished by exchanging the recording film magazine with a double-spool magazine and passing the original and unexposed film in contact with each other through the recording head, using the recording exciter as a source of light. No film is lost in the Electrone-Tone Daylite Printer—every foot is utilized.

The equipment is converted into a Play-Back unit by introducing a photo-electric cell into the circuit and utilizing the recording exciter as a fixed source of light.

All Electrone-Tone equipment described or illustrated herein is fully covered by issued patents or patent applications pending



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Universal Acquires Filmo Sound

THE entire 8 and 16 mm. film library of Bell & Howell was acquired early last month by United World Films, Inc., wholly-owned subsidiary of Universal Pictures Company, Inc., recently formed to produce and distribute sub-standard entertainment, educational and religious films on a world-wide basis.

Purchase of the B&H Filmosound library of 6,000 subjects, and acquisition of the branch offices and operating personnel in the Chicago, New York, Washington and Los Angeles exchanges; is of major importance to the 8 and 16 mm. sectors of the industry, as it marks the initial entry of a major film company into the field on a large scale.

United World will continue to distribute current subjects in the Filmosound library; and in addition will handle the 16 mm. prints of forthcoming Universal-International entertainment productions, and educational and religious releases which the J. Arthur Rank interests will produce in England. Other entertainment and educational reels will be acquired for the widened distribution which is certain to eventuate with operation by United World and Universal.

Filmosound library was originally established by Bell & Howell in 1929 to aid in the development of the 8 and 16 mm. divisions, and to provide a central point where such films could be booked. Having accomplished the original purpose, and deciding that plans of United World will assure wider expansion of distribution, B&H made the deal to confine company activities to the design and manufacture of precision motion picture equipment.

Matthew Fox, executive president of Universal, will function as board chairman of United World; with Colonel James M. Franey as president. William F. Kruse, with Filmosound since its inception and manager since 1933; Edward L. McEvoy, head of Universal's shorts subject department; and Edmund L. Dorfman, will be active vice presidents of the new organization.

Undoubtedly, initial moves of United World will be to organize and expand distribution of the film library, with indications that eventually bookings will be possible through the regular film exchanges of Universal-International in the United States and abroad. In addition, special educational and religious films in the 16 mm. size will be produced for distribution through United World.

The following statement was issued by N. J. Blumberg, President of Universal Pictures Company, Inc., and J. H. McNabb, President of Bell and Howell Company:

"The marked increase in the 16 mm. and 8 mm. market, stimulated by the ever growing desire on the part of the public to acquire information through

motion pictures, inspired the transaction whereby Universal acquires the Bell and Howell library of 16 mm. and 8 mm. films. Bell and Howell felt that Universal had conceived a real public service program in relation to the distribution of this type film and for that reason finally selected Universal from a large list of other interests in the motion picture field.

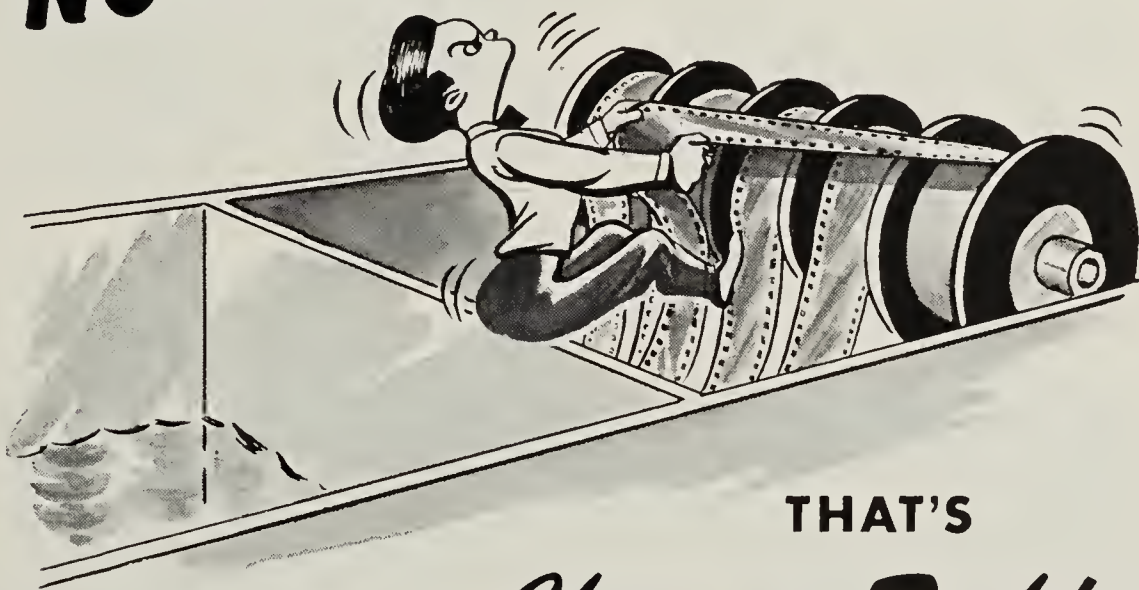
"The affiliation which Universal enjoys, world-wide, with the J. Arthur Rank organization also was an important

factor in the consummation of the deal.

"Although details of working plans are not final, each week will see developments which will rapidly bring out not only the complete organization for the distribution of the films, but production as well."

Officials of both companies emphasized the impetus gained in the 16 mm. and 8 mm. domain through the use of small range film by the Armed Services during the war is greatly responsible for an overnight interest on the part of the public in viewing 16 mm. films which contain subject matter that cannot be seen under any other conditions.

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It's true, CHROMA-TECH has developed the Add-A-Unit 16mm motion picture developing machine that "uses its head" in the production of quality motion picture development. "Uses its head" in the complete protection of film being processed, AND BEING DEVELOPED AT THE AMAZING SPEED OF 9000 FEET PER HOUR! Yes, actually over 1½ miles of film per hour developed in actual tests prove the protection of the Add-A-Unit developing machine. Many other features make this development an outstanding contribution to 16mm motion picture production. Among these, most prominent, is the feature of price. This speed, with this protection at only \$4,250 plus tax. The Add-A-Unit handling 1000 feet per hour for \$2,500 plus tax. Plan to see this remarkable equipment today! Write for complete information.

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MOTION PICTURE LABORATORIES



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Type DW-58 **\$ 26⁹⁵**
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Current Assignments of A. S. C. Members

As this issue of American Cinematographer goes to press, members of the A. S. C. were engaged as Directors of Photography in the Hollywood studios as follows:

Columbia

Charles Lawton, Jr., "The Lady from Shanghai," with Rita Hayworth, Orson Welles, Glenn Anders.

William Snyder, "The Swordsman," (Technicolor), with Larry Parks, Ellen Drew, George Macready, Edgar Buchanan.

George Meehan, Jr., "King of the Wild Horses," with Preston Foster, Gail Patrick, Guinn Williams.

Vincent Farrar, "Blondie's Holiday," with Arthur Lake, Penny Singleton, Larry Simms.

Eagle-Lion

L. W. O'Connell, "Amy Comes Across," with Franchot Tone, Ann Richards, Tom Conway.

Enterprise

Victor Milner, "The Other Love," with Barbara Stanwyck, David Niven, Richard Conte.

Metro-Goldwyn-Mayer

Hal Rosson, "To Kiss and Keep," with Gene Kelly, Marie McDonald, Charles Winninger, Spring Byington.

Sidney Wagner, "The Romance of Rosy Ridge," with Van Johnson, Thomas Mitchell, Marshall Thompson, Selena Royle, Guy Kibbe.

George Folsey, "Green Dolphin Street," with Lana Turner, Van Heflin, Donna Reed, Edmund Gwenn, Reginald Owen.

Charles Rosher, "Cynthia's Secret," with Lionel Barrymore, Edward Arnold, Lucile Bremer, James Craig, Keye Luke.

Charles Salerno, "Undercover Maisie," with Ann Sothern, Barry Nelson, Mark Daniels.

Harry Stradling, "A Love Story," with Katharine Hepburn, Paul Henreid, Robert Walker.

Ray June, "The Birds and the Bees," with Jeanette MacDonald, Jose Iturbi, Jane Powell, Kathryn Card.

Robert Surtees, "The Rich, Full Life," with Elizabeth Taylor, George Murphy, Mary Astor, Spring Byington, Gene Lockhart.

Monogram

Henry Sharp, "The Guilty," with Bonita Granville, Don Castle, Regis Toomey, John Litel.

Mack Stengler, "Fall Guy," Robert Penn, Teala Loring, Robert Armstrong.

Marcel LePicard, "Drifting Through," with Jimmy Wakely, Lee Shite, Kay Morley.

Paramount

Lionel Lindon, "Variety Girl," with Mary Hatcher, Olga San Juan, DeForest Kelley, and Paramount stars.

William Mellor, "Blaze of Noon," with Anne Baxter, William Holden, Sterling

Are YOUR Films Safe from REEL Damage?

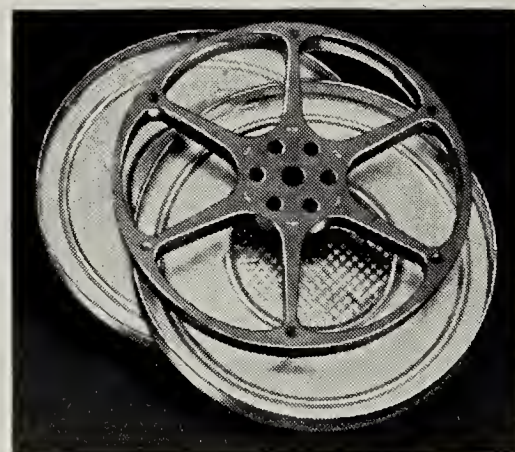
Films can be damaged beyond repair by reels which corrode, allow side-slipping, or saw on film edges. Avoid these dangers to your often irreplaceable films by using Bell & Howell reels.

B&H reels are of rust-proofed spring steel, rigid yet so resilient that they will not take a set. They have no sharp edges to cut film or fingers. Their B&H "touch-threading" hubs eliminate hunting in the dark for a slot. Their film-footage calibrations are another convenience feature.

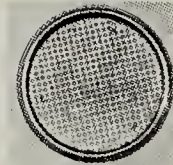
HUMIDOR CANS

Give Added Protection

B&H humidor cans for these reels are equally well built. They are rust-proof, and are easy to open without a prying tool. Heavy ribs add to their rigidity. Satin surface permits writing anywhere. Built-in humidifier pads have exclusive tell-tale disc to indicate when pad is dry.



Tell-tale disc shows in moist pad . . .



. . . matches color of dry humidifier pad.

All Capacities Available Now

Your Film dealer will soon have B&H reels and cans in all capacities for both 8mm. and 16mm. film. Place your orders with him now or write to Bell & Howell Company, 7148 McCormick Road, Chicago 45.

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Hayden, Sonny Tufts, William Bendix, Howard da Silva.

PRC

Virgil Miller, "Red Stallion," with Robert Paige, Noreen Nash, Jan Darwell.

RKO

Sol Polito, "The Long Night," (Hakim-Litvak Prod.) with Henry Fonda, Barbara Bel Geddes, Vincent Price, Ann Dvorak.

Archie Stout, "Tarzan and the Huntress," (Sol Lesser Prod.) with Johnny Weissmuller, Brenda Joyce, Johnny Sheffield, Patricia Morison.

Nick Musuraca, "Build My Gallows High," with Robert Mitchum, Jane Greer, Virginia Huston.

Jack McKenzie, "Seven Keys to Baldpate," with Philip Terry, Jacqueline White, Eduardo Ciannelli, Margaret Lindsay.

Republic

Tony Gaudio, "Gallant Man," with Don Ameche, Catherine McLeod, Roscoe Karns, Joe Frisco.

John Alton, "Wyoming," with William Elliott, Vera Ralston, John Carroll, Virginia Grey, George (Gabby Hayes), Albert Dekker, Maria Ouspenskaya.

Screen Guild

Robert Pittack, "Bells of San Fernando," (Hillcrest Prod.) with Donald Woods, Gloria Warren, Shirley O'Hara.

Twentieth Century-Fox

Leon Shamroy, "Forever Amber," (Technicolor), with Linda Darnell, Cornell Wilde, Richard Greene, Glenn Langan, George Sanders, Margot Grahame.

Harry Jackson, "Mother Wore Tights," (Technicolor), with Betty Grable, Dan Dailey, Jr., Mona Freeman, Anabel Shaw, Connie Marshall, Michael Dunne, William Frawley.

Benjamin Kline, "Jewels of Brandenburg," (Sol Wurtzel Prod.), with Richard Travis, Micheline Cheirel, Leonard Strong.

United Artists

Russell Harlan, "Red River," (Monte-rey Prod.) with John Wayne, Montgomery Clift, Walter Brennan, John Ireland, Joanne Dru, Noah Beery, Jr.

William Daniels, "Personal Column," (Hunt Stromberg Prod.) with George Sanders, Lucille Ball, Charles Coburn, Cedric Hardwicke.

Universal-International

Milton Krasner, "The Egg and I," with Claudette Colbert, Fred MacMurray, Marjorie Main, Louise Allbritton, Percy Kilbride.

Charles Van Enger, "Buck Privates Come Home," with Bud Abbott, Lou Costello, Tom Brown, Nat Pendleton, Beverly Simmons.

Warners

Peverell Marley, "Night Unto Night," with Viveca Lindfors, Ronald Reagan, Oas Massen, Broderick Crawford.

Arthur Edeson and William Skall, "My Wild Irish Rose," (Technicolor), with Dennis Morgan, Andrea King, Arlene Dahl, Alan Hale, George Tobias, George O'Brien.

Carl Guthrie, "The Woman in White," with Alexis Smith, Eleanor Parker, Syd-

ney Greenstreet, Agnes Moorehead, John Emery, Emma Dunn.

Ted McCord, "Deep Valley," with Ida Lupino, Dane Clark, Wayne Morris, Fay Bainter, Henry Hull.

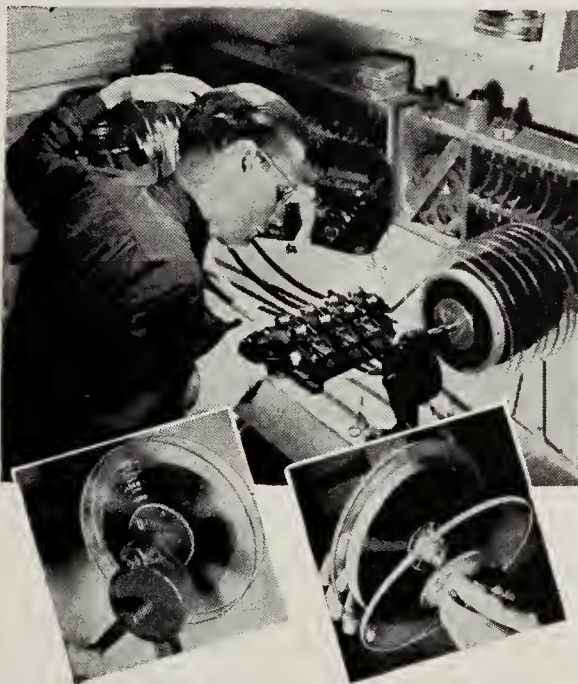
Sid Hickox, "Dark Passage," with Humphrey Bogart, Lauren Bacall, Agnes Moorehead, Bruce Bennett, Tom d'Andrea.

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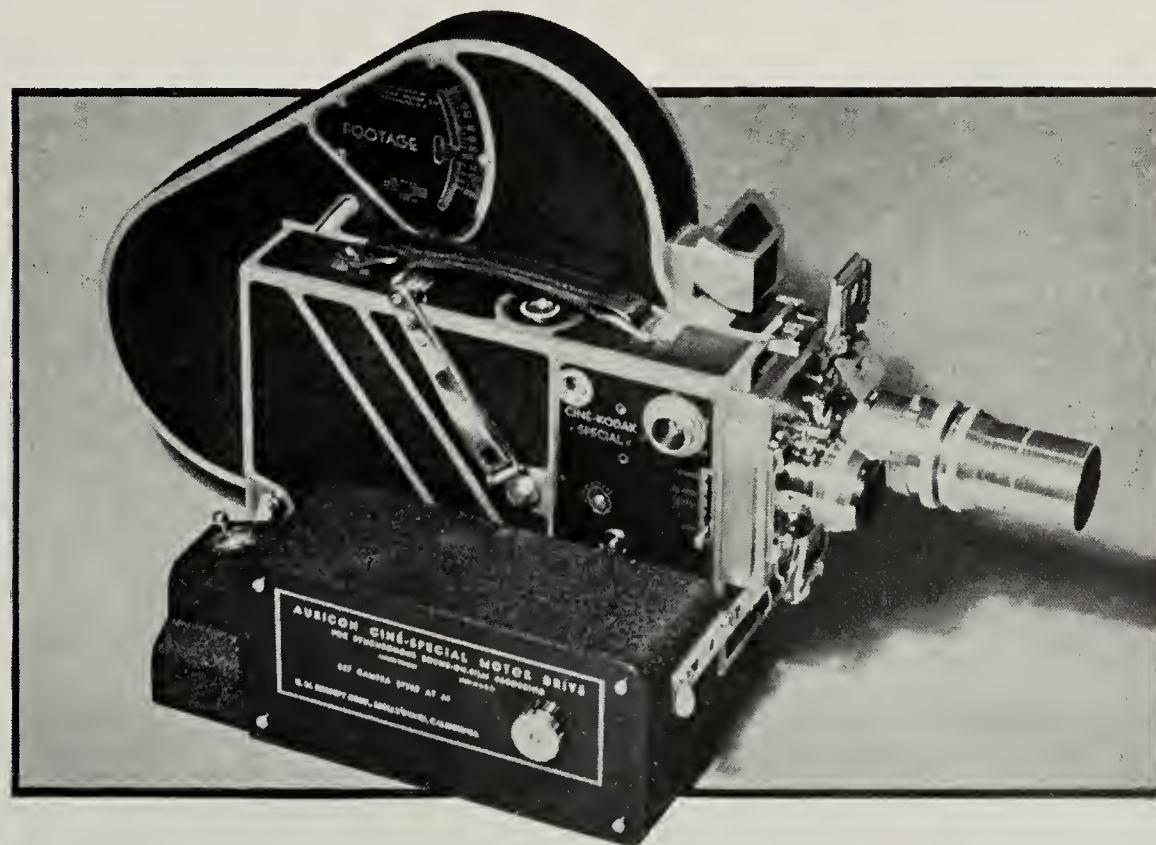
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AC-12

Camera and Tripod

(Continued from Page 441)

order and came through beautifully on the screen.

What Staub considers the most difficult job he ever tackled alone was filmed one afternoon years ago at Pickfair with the late Douglas Fairbanks and Mary Pickford.

"It was only Doug's terrific sense of humor that prompted him to agree to do the reel in the first place," Staub recalls. "It was made in connection with Fairbanks' appearance at the premiere of one of his new pictures.

"The action was something like this," Staub said. "Miss Pickford, dressed in a formal evening gown, comes out into the garden calling her husband to go to the theater. She finds him all dressed in white tie, tails and top hat, happily splashing around in the swimming pool. When Doug hears Mary's call he calmly walks out of the pool and emerges with his clothes completely dry, ready to leave for the premiere.

"To film that trick sequence, I had to cover the lens and run off about 50-ft. of unexposed film. Then I reversed the belt on the camera and photographed Doug as he walked backward into the center of the pool. After this was done, I again covered the lens and ran the 50-ft. of exposed film back through the camera again before continuing with the sequence. The closeups of Doug at the edge of the pool brushing himself dry had been made even earlier. Back at the laboratory after development all this footage was intercut with normal footage showing Fairbanks' arrival at the theater to produce a good, solid laugh for the audience.

"To film that same trick sequence today," Staub estimates, "he would use a crew of at least 18 technical men and assistants. But," he feels, "the incident does illustrate the complicated type of scene one man can film when the occasion demands it."

Staub admits he gets nostalgic satisfaction in being the only man in Hollywood who holds cards in the American Society of Cinematographers, the International Photographers and the Screen Directors' Guild. And the fact that his days as a one-man operator are over is

compensated by the luxury of being able to draw upon a full crew whenever he goes out to shoot a new "Screen Snapshot reel" for Columbia.

His present production crew measures up something like this: Camera crew 4 men, grips 2, electricians 2, sound crew 5, drivers 4, assistant director 1, make-up 1, hairdress 1; total crew, 20.

By contrast, when he did the whole job himself, he was his own writer, director, producer, cameraman, special effects man, electrician and property man. Furthermore, he cut, edited and titled those old reels and took them on the road to sell on a states-right basis to theaters and chains throughout the country.

As he remembers it, he got \$350.00 per reel (his cost) for the foreign right on such subjects. All the domestic revenue was velvet. In his first year as a lone-hand cameraman-producer, when he was twenty-four years old, his net earnings were slightly over \$11,000.

During the intervening years Staub has made, in addition to the 614 one- and two-reel shorts, about a dozen feature pictures at Republic which ranged in theme from musicals and comedies to straight dramas and rip-roaring westerns.

Since his return to Columbia to resume making "Screen Snapshots," Staub has boosted the release on these shorts from 60 release prints to 120 prints per subject. On such specials as "Famous Movie Fathers," more than 125 release prints were required. One subject titled "Thrills in Spills," presenting a lot of dare-devil by the screen's best stunt men, had an all time high of 150 release prints.

The fact that his "Screen Snapshots" reels have three times been nominated for Academy Awards, and that they play regularly in over 5,000 theaters in the United States alone, is something to bring a sparkle of satisfaction into Staub's eyes when he remembers some of the headaches of his early days.

Asked how long his contract still has to run with Columbia, Staub merely grinned.

"I don't have any contract," he said. "I don't need it. Every Christmas I just go up and shake hands with the president of the company, Harry Cohn. Then I'm all set for another year's work!"

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"The Killers"

(Continued from Page 458)

credibly smooth manner. From time to time, of course, there were minor disagreements, such as occurred during the filming of the morgue sequence. The producer felt that it might be just a bit extreme to play the actors silhouetted against a glaring white background. But he was overruled by both the director and the cinematographer, so the scene stayed in.

When the picture was finished, the technicians all felt that they had a great piece of celluloid there, but the final opinion rested with the public, since a picture with no stars is usually hard to sell at the box office. Wanting to make it as difficult as possible for himself, Hellinger took the picture first to an easy audience for preview, then to the most skeptical audience he could find. He called in members of the underworld to view the picture and give their opinions as "technical advisers." When these characters waxed even more enthusiastic than average spectators, he began to feel that the film might score.

Later, he flew a print up to author Ernest Hemingway at his mountain retreat near Sun Valley, Idaho. Hemingway invited the whole town of 60 hardy souls to see the picture, then sent a glowing telegram to Hellinger praising "The Killers" as "the best screen adaptation ever made of any of my work."

Looking back at the hectic months during which the film was in production, Mark Hellinger observes, "We had a rare association of creative personalities there—with everyone working together for the good of the picture. Working on this film, we all found that it takes unselfish cooperation to bring out the best in the individual specialist."

Asked what was his formula for cine-

matic success, Hellinger laughed: "Success? Well—in the movies it's about 50% luck and 50% teamwork from the kind of crew we had working on 'The Killers.' What can the producer do to make the picture a success? Well—I'd say he should hire the best possible talent, and then spend six months in Florida while the picture is shooting."

B & H Filmo Duo-Master Slide Projector

Adjustable condenser-lens system, superior protection for slides, high-efficiency 300-watt illumination, color-free heat filter, and rock-steadiness while slides are being changed, are features of the Filmo Duo-Master Projector for 2"x2" slides, just announced by Bell & Howell Company. Offered in a price range lower than that of the already-famous Filmo Slide Master, the new projector has been designed with the same engineering precision and skill that characterize the company's higher priced models. It is intended for personal and vocational use.

Kulka Tours for Victor

Robert H. Kulka, Latin American sales manager for Victor Animatograph headquarters in New York, is currently on a tour of Mexico and Latin American countries contacting Victor distributors.



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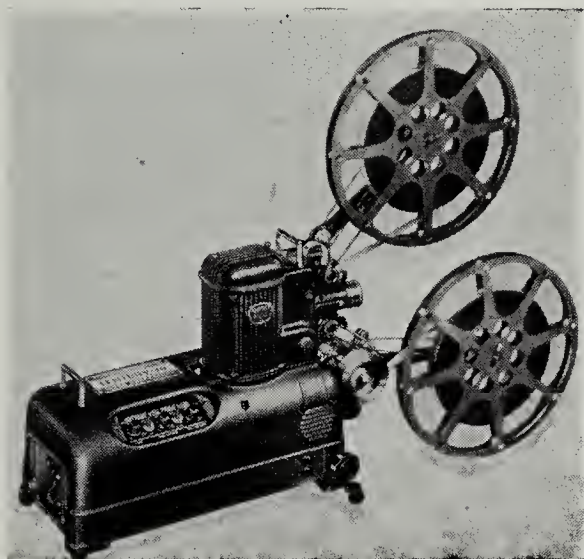
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Ampro "Century-10" 16mm. Sound Projector



Making projection of 16mm. sound-on-film movies as inexpensive as possible, while retaining all the precision features necessary for quality sound projection, is the announced purpose of the new Amprosound "Century-10."

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In every way this model demonstrates Ampro's efforts to make operation as easy as possible. Fast automatic rewind, easy threading system, quick-centering tilting knob, and centralized panel control are a few of the convenient features.

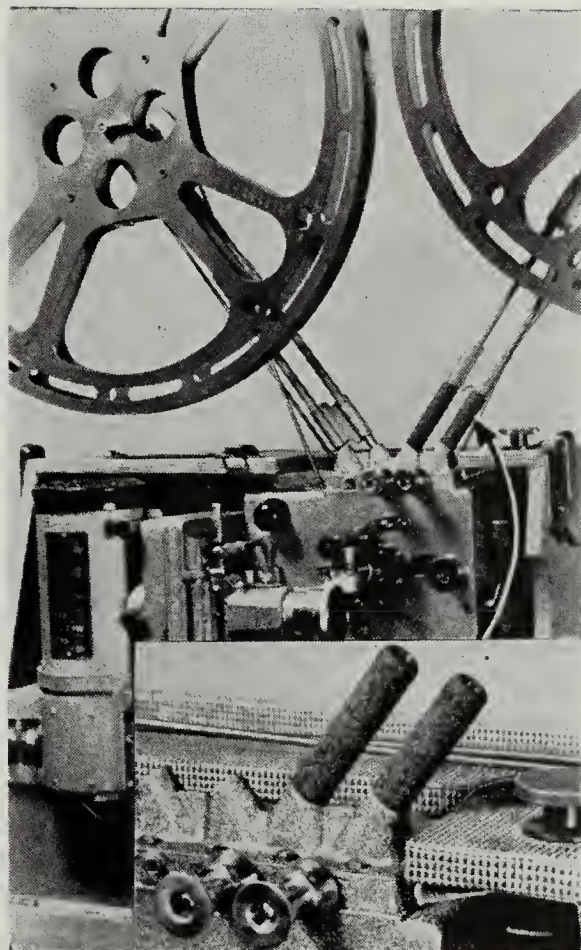
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The Victor Animatograph Corporation of Davenport, Iowa, has announced the development of new reel arm extensions which make it possible to employ 2,000-foot reels on its 16mm sound motion picture projector.

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Mr. German, long identified with the organization, is widely known in the film industry nationally.

PSA Bestows Awards

Photographic Society of America conferred highest American photographic awards at its annual banquet, held at Rochester on November 2nd, to 39 Americans and eight residents of other countries. Honors included one Honorary Fellowship—to Dr. Samuel Edward Sheppard of Rochester for scientific research in broad fields of photography since 1906—two Honorary Memberships, 10 Fellowships, and 34 Associateships.

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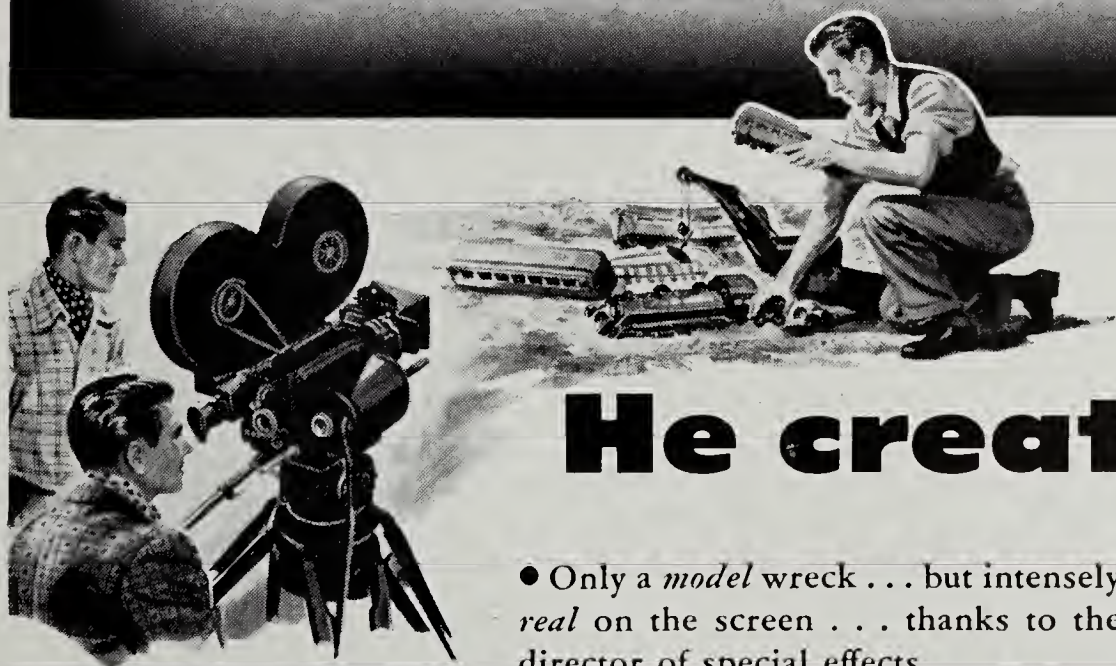
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when they were merely called spotlights as at their first introduction to the trade, it became the practice of photographers and electricians to refer to them as "those dinky inkies," to distinguish them from the larger spotlights.

The manufacturers decided that the best way to describe the product in their catalog, was to call it what the studio technicians were calling it. Thus the term Dinky Inkie became a well known trade name which never fails to provoke a smile when the layman first hears it.



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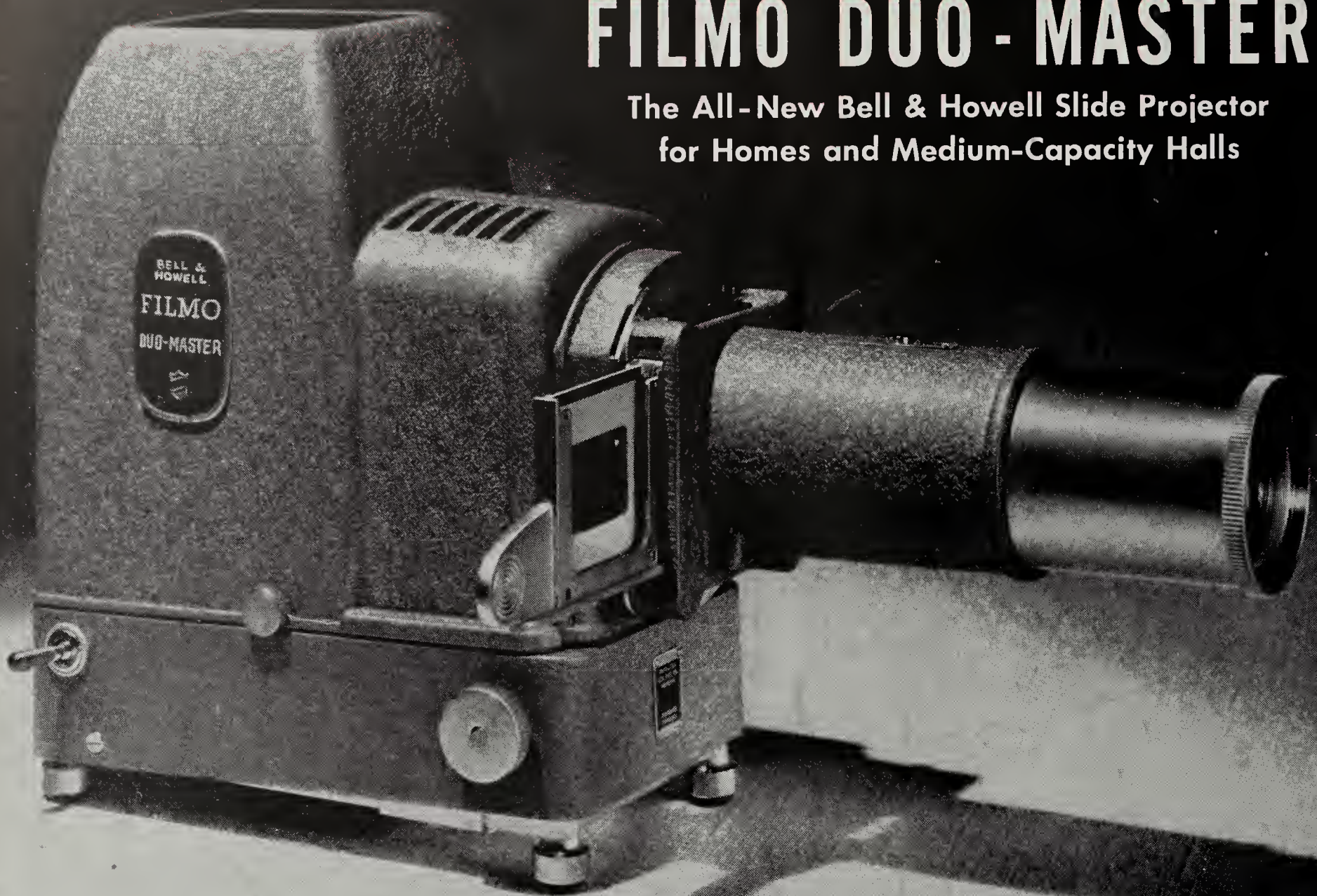
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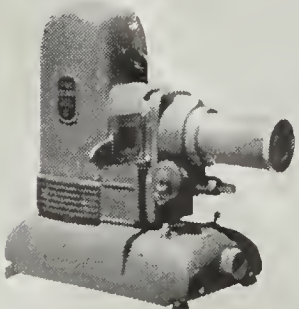
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Cool Operation. Natural draft ventilation and triple-walled lamphouse keep the housing cool. Side-operated slide carrier eliminates need to reach over the top, through lamp heat.

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